

UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF VIRGINIA  
Alexandria Division

-----: :  
SONY MUSIC ENTERTAINMENT, et al.,: :  
Plaintiffs, : :  
-vs- : Case No. 1:18-cv-950  
COX COMMUNICATIONS, INC., et al.,: :  
Defendants. : :  
-----: :

VOLUME 8 (A.M. Portion)

TRIAL TRANSCRIPT

December 11, 2019

Before: Liam O'Grady, USDC Judge

And a Jury

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COURT'S RULINGS/JURY INSTRUCTIONS

1           NOTE: The December 11, 2019, portion of the case  
2 begins in the absence of the jury as follows:

3 JURY OUT

4           THE COURT: All right. Good morning. I see all  
5 counsel are present.

6           Mr. Buchanan, you had a preliminary matter?

7           MR. BUCHANAN: Yes, Your Honor. This has to do with  
8 the bench memo that was filed by the plaintiffs late last  
9 night --

09:05:43 10           THE COURT: Yes, sir.

11           MR. BUCHANAN: -- regarding Dr. Weber. So the Court  
12 had already ruled with regard to our using the term  
13 "effective." So we didn't intend to have her use that term and  
14 say she did an effective study.

15           She'll just testify similarly to Dr. McCabe. And  
16 she, just as they've suggested, was proper, She'll go through,  
17 you know, one, two, three, and four, and show how they ran off  
18 with charts, and do some other graphs relating to that ticket  
19 data and notice data.

09:06:17 20           THE COURT: Okay. How about the -- her use of the  
21 customers' comments for the truth of them?

22           MR. BUCHANAN: Well, she's going to -- not going to  
23 do that.

24           THE COURT: Okay. All right. Then does that take  
25 care of it, Mr. Oppenheim?

1 MR. OPPENHEIM: I hope so. But I'm a little  
2 concerned because I'm not sure we're speaking the same  
3 language. So just to be clear.

4 Part of her opinion, which I believe the Court has  
5 already ruled out, is discussion of effectiveness. A  
6 substantial part of her opinion is about the effect certain  
7 notices had on the conduct of the subscribers. Which is --  
8 yes, it's the -- effect is contained within the word  
9 "effectiveness," but it's a different thing and also should be  
09:07:11 10 excluded. And I just want to make sure that that's not coming  
11 in because there has been absolutely no study done for  
12 causation here. So to suggest it would be problematic.

13 If that's what Mr. Buchanan is saying, then I think  
14 we've resolved it. If not, then I think we have an issue.

15 THE COURT: Okay. Mr. Buchanan, I think that --

16 MR. BUCHANAN: Your Honor, you know, she's not going  
17 to use the word, I mean, "effect." Obviously, when it goes  
18 from, say, you have one notice to two to three, I mean,  
19 obviously there's an effect. But she's not going to say, I did  
09:07:43 20 an effectiveness study. She can stay away from that word and  
21 just say, if there was a reduction, it ran off with each  
22 notice.

23 THE COURT: Yeah. I mean, I think she can testify to  
24 the statistical information that's produced through her study.  
25 And that -- but the effect of it and the causation is, I think,

1 previously ruled on. But if not, she's not going to talk about  
2 the causation or the effectiveness. She's just going to give  
3 the numbers.

4 And as I said, the -- you know, attorney argument  
5 about the effectiveness is -- can be made to the extent there's  
6 testimony about it of the -- you know, as has been previously  
7 identified and revisited last night in the brief -- you know,  
8 she didn't do a control group. She doesn't -- didn't do any  
9 testing, or notices, or tickets, or the consolidation of limits  
09:08:56 10 on, you know, daily notices. And there's no information about  
11 the customers and their truthfulness. I've indicated that I  
12 don't think the customers' comments are reliable, and I've  
13 excluded them.

14 So I think you've stated that she's going to testify  
15 within those limits, right?

16 MR. BUCHANAN: Yes, Your Honor.

17 THE COURT: Okay. Then -- Mr. Oppenheim, then --  
18 don't we have to wait and see what the testimony is? You can  
19 object and I'll exclude it if I think it's outside of the  
09:09:28 20 bounds of the ruling. Okay?

21 MR. BUCHANAN: I think where Mr. Oppenheim is going,  
22 we do have a few slides on the e-mail, which we're not going to  
23 show. We took them out? Okay.

24 Then never mind, Your Honor. I think we had them in,  
25 and with the motion, we pulled them out. I wanted to make sure

1 they weren't in.

2 THE COURT: They're out.

3 MR. OPPENHEIM: We just got the slides. We'll confer  
4 with opposing counsel.

5 THE COURT: Okay.

6 MR. OPPENHEIM: And unless we resolve issues with  
7 them, we'll have them with you. I can see things in here that  
8 are problematic. We'll bring that to your attention later, if  
9 necessary.

09:10:03 10 But, obviously, it's not just using the word  
11 "effect," as Mr. Buchanan said, it's the concept. If that's  
12 the understanding, we're fine. Thank you.

13 THE COURT: Understood. All right. Anything else?

14 MR. BUCHANAN: Yes, Your Honor, just a couple of  
15 the -- we have objections to some of the demonstratives that  
16 are being offered. And maybe you could give the Court a copy?  
17 Thank you.

18 THE COURT: This is with Dr. Lehr?

19 MR. GOULD: May I approach, Your Honor?

09:10:35 20 MR. BUCHANAN: So the first one is 4, page 4. It  
21 says: Impact of infringement is substantial.

22 MR. GOULD: Page 4?

23 MR. BUCHANAN: The slide 4. Okay. That comes from a  
24 report that's not in evidence.

25 And then same with the next one, they're taking

1 pieces from articles or reports that he read, and they're not  
2 in evidence, they're not admissible.

3 THE COURT: Okay. 4, 5 -- I'm with you. Go ahead.

4 MR. BUCHANAN: Okay.

5 MR. GOULD: Your Honor, would you like to go issue  
6 one by one or --

7 THE COURT: Well, I don't know how many there are.  
8 So how many do you have?

9 MR. BUCHANAN: Just a handful, Your Honor.

09:11:36 10 THE COURT: Okay. Then go ahead.

11 MR. BUCHANAN: 9: Cox paid billions in cash  
12 dividends to its owners. That wasn't in his report and it's  
13 not relevant, that they paid dividends to the owners.

14 The profits of the company, revenues, they have that  
15 in the slide, but this is something different. It wasn't in  
16 his reports. He did three reports.

17 Also, the 17, 18, 19 rely on ICOMS billing data  
18 that's not in evidence.

19 That's it, Your Honor.

09:12:55 20 THE COURT: All right. Thank you.

21 Mr. Gould.

22 MR. GOULD: Thank you, Your Honor. I can start at  
23 the beginning.

24 The two slides that excerpt economic market studies  
25 are certainly permissible things that Dr. Lehr can consider



1 whether they're admissible or not. And we would submit in this  
2 case they actually are admissible under 803(17), exception for  
3 market studies.

4 One of those two reports was admitted in BMG through  
5 Dr. Lehr. You spoke at length that Mr. -- Dr. Lehr was, in  
6 fact, the first witness in that case who was qualified to  
7 actually discuss and opine on those. And we would offer that  
8 the same here, and intend to admit one of them, PX 439 on slide  
9 5, whether you consider it as admissible or even hearsay that  
09:13:45 10 Dr. Lehr can consider, those are appropriate for an expert.

11 THE COURT: All right. And those were produced in  
12 discovery?

13 MR. GOULD: Yes, sir.

14 THE COURT: Okay. How about 9, dividends to owners?

15 MR. GOULD: 9 is a line item out of an audited  
16 financial statement that the defendants produced later in  
17 discovery. Mr. -- Dr. Lehr testifies and reported at length on  
18 Cox's profitability.

19 Understanding how much Cox paid to its upstream owner  
09:14:14 20 from its profits is critically important information to  
21 understand just the level of profitability that this company is  
22 making, and the jury is well entitled to consider it. It's a  
23 gloss on the profitability analysis that he's provided.  
24 There's no question that the statements are factually accurate.  
25 The defendants won't contest them.

1 THE COURT: On 9, the numbers? Is that what you're  
2 talking about?

3 MR. GOULD: Yeah.

4 THE COURT: Okay. And this -- and who was actually  
5 paid the -- was it Cox?

6 MR. GOULD: Cox Enterprise is the shareholder owned  
7 by the Cox family, family trust.

8 THE COURT: And that Cox Enterprise includes Cox  
9 Communications, Cox, LLC, what else?

09:15:06 10 MR. GOULD: So Cox Communications is the -- as I  
11 understand it, the operating entity is the defendant here. Cox  
12 Communications is wholly owned by Cox Enterprise. Cox  
13 Enterprise is the family trust, upstream parent that received  
14 the billion-dollar dividend checks that Mr. Mencher testified  
15 about in his deposition and who will appear later this week.  
16 This is going to be in evidence.

17 THE COURT: Okay. How about 17, 18, 19, the billing  
18 data not in evidence?

19 MR. GOULD: So this relates to the Jarchow billing  
09:15:45 20 reports that have been discussed at length. There's no  
21 question that the ICOMS billing reports, which we deposed  
22 Mr. Jarchow on at length, are admissible.

23 And, in fact, we can do it now or later, we would  
24 move to admit PX 467 to 474. There's no basis to object to  
25 those admissions. If we need to, we're happy to put on another

1 deposition clip to show Mr. Jarchow laying the foundation for  
2 the business record.

3 Even that's not necessary because Dr. Lehr can  
4 certainly rely on Cox's own admissions, business records,  
5 billing information to provide in his report.

6 THE COURT: And again, those were all produced during  
7 discovery and identified by Jarchow?

8 MR. GOULD: I'm sorry, Your Honor. Could you repeat  
9 that, please?

09:16:31 10 THE COURT: So those were all admitted -- those were  
11 all documents that were received by Cox and subject to the  
12 Jarchow deposition; is that right?

13 MR. GOULD: Those are Cox's documents. Cox, by order  
14 of court, was ordered to produce their billing records for  
15 customers. Slides 17 through 19 report on Cox's own billing  
16 records. We're surprised to hear the argument, to be honest.

17 THE COURT: Okay. Thank you.

18 All right, Mr. Buchanan.

19 MR. BUCHANAN: In terms of paying dividends to the  
09:17:09 20 trust, I don't think that is relevant. Again, it was not in  
21 his report. He -- in his report he did analyze the revenues  
22 and profits over a number of years of Cox and the parent  
23 company.

24 But, you know, putting out what they paid to a trust  
25 is -- I think it goes beyond -- they're not a defendant in this

1 case, and it -- I don't think it's relevant at all. And again,  
2 they did not put this in the report. He could have done that.  
3 They have a lot of other data that they're using.

4 The ICOMS data, you know, they -- you know, it has  
5 been produced, but, you know, here we have this issue with  
6 Mr. Jarchow and taking his deposition, you know, whether they  
7 allow it in subject to the deposition. So they want to have it  
8 both ways.

9 THE COURT: Okay. Well, why doesn't the trust  
09:18:01 10 information, profits, why wasn't that in the report of  
11 Dr. Lehr?

12 MR. GOULD: The point -- so --

13 THE COURT: My question first, then go ahead and try  
14 to explain.

15 MR. GOULD: Thank you. I paused, realizing that.  
16 The audited financials were produced later in discovery. By  
17 the time of his interim report, we received an incomplete  
18 excerpt. Out of a 60-page audited financial, they gave us  
19 page 24, 26, and 28 that had some numbers.

09:18:37 20 It wasn't until we moved to compel, I think the last  
21 week or two of discovery, successfully for the complete audited  
22 financials with the body of consolidated footnotes and  
23 information that Magistrate Judge Anderson understood and ruled  
24 was necessary to understand the full scope of those reports.  
25 My -- I can't recall the specific dates, but those complete

1 reports came very late in discovery.

2 And as to the --

3 THE COURT: So did he do a supplemental report to  
4 include that? Did you reference it?

5 MR. GOULD: He doesn't talk about dividends in his  
6 reports. He does a profitability analysis and looks at it a  
7 number of ways.

8 The amount of cash that Cox paid to its shareholder  
9 is critical in understanding just how much money Cox could pull  
09:19:31 10 out of this business and not feel any impact from it.

11 THE COURT: All right.

12 MR. GOULD: Lastly, Your Honor, on the ICOMS, so  
13 there's two pieces of the ICOMS. There's the very large  
14 billing reports that Cox produced and Mr. Jarchow was deposed  
15 on at length.

16 Later in time Cox produced what they're now calling  
17 as also part of that same report, but all it does is identify  
18 the business customer names. It doesn't have any financial  
19 data in it.

09:20:00 20 So the two, according to Cox, are related because  
21 they come from the same database, but they're, very, very, very  
22 different things. One is just the name of the business  
23 customers, one is the billing reports.

24 THE COURT: Okay. Thank you.

25 MR. GOULD: And as to the -- just the last thing on

1 the dividends. Dr. Lehr references the audited financials that  
2 he received in limited excerpted form during the interim  
3 period.

4 THE COURT: Okay.

5 MR. BUCHANAN: Just one final point, Your Honor.

6 THE COURT: Yes, sir.

7 MR. BUCHANAN: Mr. Mencher was deposed before any of  
8 Dr. Lehr's three expert reports over multiple months, and they  
9 asked him about the dividends. So they had that information  
09:20:42 10 before he did his first, second, or third report.

11 THE COURT: Okay. All right. Well, I'm going to  
12 admit the demonstratives 4, 5, 17, 18, 19. I think 4 and 5  
13 clearly are admissible under 803(17), and I've seen them  
14 previously. 17 and 18 are compilations of billing records that  
15 were produced and testified in part.

16 And I find that they're -- I don't think it's  
17 necessary to admit the underlying documents as long as they  
18 have been produced and been subject to possible, you know,  
19 depositions and other ability to understand the records, and  
09:21:35 20 they're Cox's records to begin with that.

21 I don't -- I'm not going to allow 9. I find that it  
22 wasn't part of Dr. Lehr's report. And if -- and that the  
23 demonstrative shouldn't go in. That if there is -- you know, I  
24 may revisit it if it's proper -- if Dr. Lehr is asked  
25 substantively about -- especially on cross-examination.

1           So the underlying data was identified from which he  
2 could pull this information, but he didn't opine on it in his  
3 reports; is that right?

4           MR. GOULD: By the time of his initial report we  
5 hadn't received the audited financials.

6           THE COURT: Okay.

7           MR. GOULD: We pushed very hard to get those. Seeing  
8 the writing on the walls, Cox excerpted about three pages from  
9 their 50 or 60-page financial report. The bottom of each page  
09:22:48 10 said something along the lines of: The footnotes and  
11 explanatory notes are necessary to understand these documents.

12           I'm paraphrasing. You have seen audited financials,  
13 you are familiar with what I am talking about.

14           Dr. Lehr didn't have those. He didn't have those  
15 during any of his three reports. In his deposition he  
16 testified that in order to understand the full audited  
17 financials and what those meant, he would need the full audited  
18 financials, including the notes.

19           We moved to compel on those, citing, among other  
09:23:26 20 things, Dr. Lehr's testimony that he would need that  
21 information to opine on those and understand them in full.  
22 Magistrate Judge Anderson granted that request. And Cox  
23 produced them -- I don't recall the date -- very, very, very  
24 late in discovery.

25           You know, there's -- I don't want to rehash

1 discovery, but there is a reason that he didn't have the full  
2 information at the time. So he could have put something in his  
3 report and then said, well, I don't know if this is right  
4 because I haven't seen the rest, you know, behind the curtain,  
5 but there is a number here.

6 I think, respectfully, Your Honor, we should be given  
7 a little leeway on this one, and I would ask you to reconsider  
8 admission of that slide.

9 THE COURT: Okay.

09:24:07 10 MR. BUCHANAN: Just one second. They took  
11 Mr. Mencher's deposition before his first of three reports,  
12 which are probably issued over two months. So they had that  
13 piece of information. They didn't need the audited financials  
14 to know about the dividend. Plus he did three reports over  
15 three months. They had all that audited financials before he  
16 did --

17 THE COURT: They are saying he didn't have the  
18 audited financials when he -- this is Dr. Lehr --

19 MR. BUCHANAN: Yes.

09:24:33 20 THE COURT: -- when he issued his reports.

21 MR. BUCHANAN: His first report. I don't know about  
22 the second and the third reports, but he -- they had the  
23 information for this chart from Mr. Mencher's deposition, which  
24 was before his first report. He talked about that.

25 It's just a piece of information. They don't need



1 audited financials to find out what the dividends were.

2 THE COURT: So those were disclosed in the --

3 MR. BUCHANAN: As I understand it in Mr. Mencher's  
4 deposition before Dr. Lehr's first report.

5 MR. GOULD: If I could clarify on the timing.

6 Mr. Mencher -- I deposed Mr. Mencher. It was in  
7 April. And he testified that he relied on the audited  
8 financials in preparing for his deposition. We hadn't received  
9 those. It was part of the reason that we asked for them and  
09:25:16 10 pushed for them.

11 What Mr. Mencher testified about was the dividend  
12 from 2018, 2017, and had a fuzzy memory of the dividend maybe  
13 from 2016. He had no memory at all of the dividends that are  
14 presented in this chart.

15 THE COURT: '12, '13, and '14?

16 MR. GOULD: Correct.

17 THE COURT: Okay. All right. I am going to allow  
18 the demonstrative as well as the testimony. I find that the  
19 late-produced auditeds is good cause for them not to be in the  
09:25:51 20 report. And that the production of data in '17 and '18 is  
21 not -- you know, wasn't going to be relevant to the time  
22 period, and that the late produced, subsequent audited  
23 financials, if he can testify about the information in those  
24 reports, will be admitted. And your exception is noted.

25 All right. Let's -- ready for our jury?

1 MR. BUCHANAN: Yes, Your Honor.

2 THE COURT: All right. Let's get our jury, Joe.

3 NOTE: At this point the jury returns to the

4 courtroom; whereupon the case continues as follows:

5 JURY IN

6 THE COURT: All right, good morning. Please be  
7 seated everyone.

8 Thank you again for finding your way in on time. And

9 I apologize, we had a couple matters that we didn't expect to

09:27:22 10 have to raise before we brought you out here. Otherwise we

11 would have done it before 9 o'clock. And so, I appreciate your  
12 patience.

13 And please give me that nod of heads that you didn't  
14 do any research or investigation or talk to anybody. Thank  
15 you.

16 All right. Next witness, Mr. Gould.

17 MR. GOULD: The plaintiffs call Dr. William Lehr.

18 NOTE: The witness is sworn.

19 THE COURT: Good morning, Dr. Lehr.

20 THE WITNESS: Good morning.

21 THE COURT: Please, Mr. Gould, proceed.

22 MR. GOULD: Thank you, sir.

23 WILLIAM H. LEHR, called by counsel for the

24 plaintiffs, first being duly sworn, testifies and states:

25 DIRECT EXAMINATION

1 BY MR. GOULD:

2 Q. Good morning, Dr. Lehr. How are you?

3 A. Fine, thank you.

4 Q. Thank you for being with us here today. Could you please  
5 state your full name for the record.

6 A. Yeah, it's William Herndon Lehr.

7 Q. If you could pull that just a tad closer.

8 A. Okay.

9 Q. Thank you, sir.

09:28:43 10 A. It's William Herndon Lehr.

11 Q. And what is your occupation, Dr. Lehr?

12 A. I'm a telecommunications Internet industry economist with  
13 over 25 years of experience engaged in academic research and  
14 consulting to industry and policy makers on matters of  
15 relevance to the Internet ecosystem. And a significant part of  
16 my work in that area relates to the evolution of broadband and  
17 the Internet and it's role as the principal platform for the  
18 distribution of digital media of all kinds.

19 Q. And have you done any work in connection with this case?

09:29:21 20 A. Yes.

21 Q. What were you asked to do?

22 A. I was asked to offer my assessment as a professional  
23 economist on three matters of relevance. The first was whether  
24 or not the evidence supports the view that copyright  
25 infringement causes economic harm to rights holders.

1 Two, to assess the economics of Cox's business, how  
2 it fits within this larger question of piracy and what happens  
3 with piracy.

4 And third, to offer, you know, to assess Cox's  
5 economic incentives and financial benefit from tolerating  
6 infringement by subscribers on the Cox network.

7 Q. Before we talk about those opinions, I want to understand  
8 a little bit of your background.

9 How long have you been a telecommunications and  
09:30:26 10 Internet industry economist?

11 A. Well, I mean, I have been actively focused on these  
12 industries for about 25 years.

13 Q. Where are you currently employed, sir?

14 A. I am currently employed at MIT, Massachusetts Institute of  
15 Technology, in their computer science and artificial  
16 intelligence lab where I participate in a research program  
17 that's -- you know, multidisciplinary research program.

18 Q. Tell us a little bit about your educational background,  
19 please.

09:30:54 20 A. I have a Ph.D. in economics from Stanford University in  
21 1992. And then I have a MBA in finance from the Wharton  
22 Business School. And then I have also a Master's in  
23 engineering and two undergraduate degrees, one in engineering  
24 and one in history from the University of Pennsylvania.

25 Q. What year did you earn your Ph.D.?

1 A. 1992.

2 Q. Now, I think you said you're a research scientist; is that  
3 right --

4 A. Yes.

5 Q. -- at MIT? Tell us a little bit about -- what do you do  
6 as a research scientist?

7 A. Not every university has positions like this, but my  
8 appointment there is a non-teaching appointment. I don't have  
9 to -- I do teach occasionally, but I don't have to. I don't  
09:31:38 10 have regular things. And what I do there is I participate in a  
11 range of the multidisciplinary research programs as part of the  
12 advance networking architecture group. And some of those  
13 programs are funded by The National Science Foundation. Some  
14 of those are funded by grants from industry, sponsors of the  
15 research that goes on at MIT in the lab.

16 Q. And just at a high level generally, what are some of the  
17 topics of your academic research and writing?

18 A. Well, you know, as I said, a key area of focus is on the  
19 nexus of economic and policy issues that arise because of the  
09:32:20 20 technological trends that are shaping and shifting the  
21 broadband markets in the industry. So how do changes in the  
22 technology and the markets and the demand and the way these  
23 technologies are being used affect and what are those sort of  
24 feedback loops.

25 I also, you know, have spent time involved in a

1 number of projects thinking about the future network  
2 architectures of the Internet. And quite a bit of work on  
3 things like the convergence of fixed and wireless networking.  
4 And the management of our radio frequency spectrum, things  
5 like, you know, how do you manage the airwaves that we use for  
6 radio and sort of anything that goes over the air.

7 Q. Dr. Lehr, there is a document in front of you labeled  
8 PX 525. Do you recognize that?

9 A. Yes, I do.

09:33:09 10 Q. What is that?

11 A. This is my CV, my curriculum vitae. It gives a  
12 description, you know, brief biographical description, and my  
13 sort of professional engagements and then, you know, my  
14 publications.

15 MR. GOULD: Move to admit PX 525.

16 THE COURT: Any objection?

17 MR. BUCHANAN: No objection.

18 THE COURT: It's received.

19 MR. GOULD: Thank you.

20 BY MR. GOULD: (Continuing)

21 Q. Dr. Lehr, other than this trial, have you ever testified  
22 as an expert witness before?

23 A. Yes.

24 Q. How many times?

25 A. Either by deposition and filing reports or at trial,

1 probably, you know, since the mid-'90s, probably about 30 or 40  
2 times.

3 Q. And have you testified or done work in matters with issues  
4 related to this case?

5 A. Yes.

6 MR. BUCHANAN: Objection, Your Honor. May we  
7 approach?

8 THE COURT: Well, let's --

9 MR. GOULD: I --

09:34:03 10 THE COURT: Let's not go where Mr. Buchanan thinks  
11 you're going.

12 MR. GOULD: I have no intention.

13 THE COURT: Okay. Thank you.

14 BY MR. GOULD: (Continuing)

15 Q. And have you done work in any matters related to this  
16 case, just generally without identifying them?

17 A. Yes.

18 Q. Okay. And, roughly, what percentage of your work is  
19 devoted to this type of testifying or expert work?

09:34:29 20 A. In terms of my time, I would say about 20 percent of my  
21 time is directed towards non, you know, academic research. And  
22 I would say, you know, it varies year to year, something like  
23 half of my time is spent on, you know, providing expert  
24 testimony in the context of various litigation. The other is  
25 doing other sorts of advisory types of positions.

1 Q. So half of what percent?

2 A. So that would be about 10 percent, I guess, of my total  
3 time.

4 Q. So roughly 20 percent consulting, and half is this type  
5 of --

6 A. Half of the consulting time, I would say, roughly, is  
7 devoted to, you know, participating in litigation.

8 Q. And so, the other 80 percent is what?

9 A. That's devoted to the work I do on -- you know, associated  
09:35:15 10 with my economic research.

11 Q. What kind of materials did you review in forming your  
12 opinions in this case?

13 A. Well, in the normal course of my work I'm constantly  
14 reading the trade press and academic about -- you know,  
15 literature on matters that are directly relevant to this case.  
16 So all of that general background is, you know, stuff that I  
17 relied on.

18 But more specifically, to answer and address the  
19 issues I was requested to address in this matter, I did a sort  
09:35:46 20 of more in-depth research of publicly available documents. And  
21 that includes, for example, you know, a more extensive review  
22 of the academic literature in the area of sort of what  
23 economists and other analysts have to say about copyright,  
24 looking at publicly available sources.

25 But then because Cox is a privately held company and



1 because a lot of the information in this case is, you know,  
2 confidential, a bunch of the information that was considered  
3 was information that was provided in the context of this trial.  
4 And some of the important information there are the various  
5 internal documents from Cox or documents like the audited  
6 financials we heard about earlier that speak to Cox's financial  
7 statements. So their profit/loss statements, the flow of cash  
8 flows. So those sorts of documents.

9 I also looked at data and information from -- that  
09:36:42 10 was produced from the so-called CATS system, the Copyright  
11 Abuse Tracking System, that documented the match between  
12 subscribers and tickets received, the DM -- so-called DMCA  
13 tickets, and then the ICOMS billing data, which is the internal  
14 billing data. And I had subsamples of -- I mean, I -- well, I  
15 had the data that was produced by Cox, which are a subsample of  
16 the total data that Cox has in its CATS system and in its  
17 billing system. And so, that's data also I considered.

18 And then I considered a number of other internal  
19 documents that are produced in the context of this case that,  
09:37:23 20 you know, represent internal communications, things like  
21 e-mails that were passed amongst Cox managers. Various  
22 deposition testimony. For example, Scott Mencher's deposition  
23 testimony, I did review. And a number of other documents,  
24 reports that were considered by Cox and were produced by -- in  
25 the context of this.

1 Q. We'll talk about some of those moving forward. Are you  
2 being compensated -- are you being paid for your time here,  
3 sir?

4 A. Yes.

5 Q. And at what -- how much?

6 A. For my work associated with this, I'm paid at my normal  
7 professional rate of \$650 an hour.

8 Q. And roughly how much time have you spent on this  
9 engagement over the course of the time you've been engaged  
09:38:12 10 throughout the case?

11 A. Somewhere between 150 and 200 hours.

12 Q. Is -- does your compensation for your work in this case  
13 depend in any manner on reaching a particular conclusion or a  
14 particular outcome in the case?

15 A. No. I mean, I was asked to offer my opinions and, you  
16 know, given access to the data that I thought I needed to  
17 address to offer those opinions, and then my opinions are what  
18 my opinions are. My assessment is what it is.

19 Q. Did you reach any conclusions that you think will assist  
09:38:41 20 the jury in understanding issues in this case?

21 A. Yes.

22 MR. GOULD: Your Honor, we would tender Dr. Lehr as  
23 an expert in the field of Internet industry and  
24 telecommunications industry economics.

25 THE COURT: Any objection for him -- receiving him

1 for those purposes?

2 MR. BUCHANAN: No, Your Honor.

3 THE COURT: All right. He's received for those  
4 purposes.

5 MR. GOULD: Thank you.

6 BY MR. GOULD: (Continuing)

7 Q. Dr. Lehr, I want to walk through a summary of your  
8 opinions, and then we'll circle back and we'll go through each  
9 one of them in detail.

09:39:07 10 Did you prepare some slides to assist with your  
11 testimony today?

12 A. I did.

13 Q. So let's talk through what -- can you explain them briefly  
14 for the jury? What was your first opinion in this case?

15 A. Sure. So the first opinion that I'm going to be  
16 explaining is that copyright infringement causes significant  
17 economic harm to rights holders.

18 You know, this is an opinion that, as I'll explain,  
19 is why -- is almost universally, I believe, supported by the  
09:39:34 20 evidence available.

21 Q. And what was your second opinion?

22 A. That while it's easy to understand the conclusion that  
23 copyright infringement causes very significant harm, it turns  
24 out, for reasons I'll explain, that the data just doesn't exist  
25 to be able to really quantify the economic harm that's --

1 plaintiffs suffer, you know, in this matter or even more  
2 generally with any kind of precision.

3 Q. And your third opinion, Dr. Lehr?

4 A. When you look at Cox's business, you can understand, first  
5 off, that where they sit now, they're a highly profitable  
6 business. And that having infringing subscribers on their  
7 network has contributed significantly to their business and  
8 their profitability.

9 Q. And your fourth opinion, Dr. Lehr.

09:40:38 10 A. The fourth opinion is that Cox has a significant economic  
11 incentive and derives a financial benefit from having  
12 infringing subscribers on its network, retaining those  
13 subscribers on its network.

14 Q. Now, let's turn to your first opinion.

15 Dr. Lehr, could you walk us through the bases for  
16 your opinion, please.

17 A. Yeah. I mean, the basic economics of copyright, and sort  
18 of the economic theory that underlies it, is pretty straight  
19 forward. Copyright exists so that rights holders have a legal  
09:41:15 20 protection and an opportunity to realize the value of the  
21 content that they hold the copyright to.

22 And if -- what piracy does is it forces them, in  
23 trying to realize the value of their copyrighted content, to  
24 compete against zero priced goods, free goods. And that is  
25 fundamentally disruptive to their ability to recover it.

1 And what that means is that in a world with piracy,  
2 their revenues are significantly lower. And as a consequence,  
3 their profitability is significantly lower.

4 And so, you can understand that by going through the  
5 various pieces of what is involved in computing what their --  
6 what the effect on their revenues is.

7 Q. So what does -- what do you mean by displaced legitimate  
8 sales in the first bullet on your slide?

9 A. So you can break down revenues into two pieces. You can  
09:42:11 10 look at what it is, how many units they sell and how they sell  
11 them, and you can look at what the prices are.

12 So if people are downloading lots of or getting  
13 available access to lots of free illegal copies, then those  
14 illegal copies out there are competing and displacing sales,  
15 legal sales, unit sales of the content by all the different  
16 ways that those legal sales might take place.

17 So there's the -- there's a cannibalization so that  
18 the number of sales they can make is lower. That's the first  
19 effect. That's sort of the Q or quantity effect.

09:42:48 20 Q. And the second -- so the first talks about the quantity.  
21 The second bullet: Piracy negatively impacts pricing.

22 What do you mean by that?

23 A. That the pricing at which they're able to sell legal sales  
24 is driven down. So the prices they can charge for the sales  
25 they're still able to make in a world with piracy are lower

1 because they're always competing against free goods.

2 And so, both the P and the Q are lower in a world  
3 where piracy exists. And so, the product of them are, in a  
4 sense, doubly lower. So revenues are lower because of both of  
5 those effects in a world where they're having to deal with  
6 piracy.

7 Q. You talked about P and Q. And just to clarify, what's the  
8 P and what's the Q?

9 A. The P is the price that they can sell. Now, they sell in  
09:43:37 10 many different ways, so there's actually lots of prices. But  
11 like the price for the box sets, the price for the DVDs, the  
12 price for the streaming content, all of that, all of those  
13 prices are adversely impacted by having to compete with the  
14 fact that people can get the thing for free if they're willing  
15 to steal it.

16 Q. And Q is quantity?

17 A. Q is the quantity, the number of sales of all the  
18 different categories of things they sell.

19 Q. Now, this third bullet point: Copyright holders incur  
09:44:06 20 substantial enforcement costs.

21 What do you mean by that, sir?

22 A. Well, setting side sort of the revenue implications, by  
23 avoiding having to deal with infringing subscribers directly,  
24 you're avoiding having to incur the enforcement costs. Which  
25 includes sending notices, handling the calls, staffing your

1 department that deals with this. Those sorts of costs are  
2 examples of costs that are avoided.

3 Q. So for the copyright holders, you're talking about the  
4 copyright holders' enforcement costs?

5 A. Oh, sorry. The copyright holders actually have been  
6 forced to do a lot in that it's -- you know, they've had to  
7 pursue litigation. They've actively had to pursue enforcement  
8 and try to address this directly.

9 And then, of course, it's had a big disruption effect  
09:44:54 10 on their business models. So, for example, you know, copyright  
11 holders are more reticent, for example, to release really high  
12 resolution versions, digital versions of their content into a  
13 world where it could easily be pirated. Because a digital  
14 copy, once it gets out there, can be replicated, you know,  
15 perfectly. And if it's a high resolution copy, then, you know,  
16 it's a more dangerous copy out there by pirates.

17 So their ability to pursue different ways to build  
18 out their business models has been adversely affected.

19 Q. And the last point: Piracy defers -- deters future  
09:45:37 20 investments and reduces incentives to create.

21 What do you mean by that?

22 A. Yeah, the impact of piracy, you know, plays out over time  
23 because the incentives of copyright holders to invest in new  
24 artists and incurring the risky costs of, you know, helping  
25 manage those artists' careers, producing the musical

1 recordings, marketing and distributing them, if they don't --  
2 if they expect that they're not going to be able to recover the  
3 revenues they have a reasonable expect -- they should have a  
4 reasonable expectation to be able to recover, then that's going  
5 to deter or limit their sense of investment.

6 Piracy just sucks oxygen out of the whole ecosystem  
7 and means that there's less money available and less of an  
8 incentive to use the money to invest in creative content.

9 Q. Now, apart from your own background as an Internet  
09:46:34 10 industry economist, did you review any articles specifically  
11 related to this opinion?

12 A. Yes.

13 Q. And could you tell us about that.

14 A. Yeah. Well, as I mentioned earlier, I looked at the  
15 economics literature with a special care to see whether or not  
16 in fact what, you know, I had understood before, you know,  
17 being involved in these sort -- you know, being involved in  
18 sort of litigation, especially with copyrights, was that, you  
19 know, it's obvious to an economist, theoretically, that, you  
09:47:10 20 know, copyright infringement would harm rights holders. That,  
21 you know, stealing goods is bad for a business that's trying to  
22 sell goods.

23 But the question about how it harms them is a  
24 question about the empirical evidence. Like if you were going  
25 to try and quantify it, and say, how significant is the harm?



1 You need to look at the empirics. And so, I considered that  
2 literature.

3 And in the context of this case where we're focusing  
4 on infringement by the use of peer-to-peer applications like  
5 BitTorrent, there's a question about how much does BitTorrent  
6 traffic -- how does that relate to the likelihood that that  
7 traffic is infringing -- copyright infringing traffic?

8 So I considered, for example, papers that addressed  
9 that kind of point.

09:47:57 10 Q. And how many papers, at a ballpark, did you consider, or  
11 studies or articles?

12 A. Well, I think I referenced in my various earlier reports  
13 somewhere between 20 and 30 papers. And, you know, I don't --  
14 I mean, the number of papers that I've read on this subject is  
15 probably -- you know, is obviously much more than that. But a  
16 lot of these papers -- a number of the papers I cited are  
17 survey papers that have gone back and said, okay, at different  
18 points in time, here's what the literature says. There are X  
19 number of studies and they've reached the conclusion.

09:48:29 20 And the overwhelming indication from that, those  
21 sorts of survey articles in this field is that economists all  
22 agree that there is a very significant adverse impact on the  
23 sales and the businesses of copyright holders due to piracy.  
24 But because they're using different datasets and because  
25 they're coming at it using different methodologies at different

1 timeframes, they come up with very different estimates. But  
2 all of them are big.

3 Q. Now, you said the word "papers." What do you mean that  
4 you've reviewed papers? What are these papers?

5 A. Oh, sorry. A number -- what economists or an analyst  
6 looking at this field does is you look at sort of the  
7 literature. And one of the first things you look at in terms  
8 of the literature is, you know, the academic peer-reviewed  
9 press. And there's many different publications.

09:49:23 10 But, you know, the typical pattern by which academics  
11 publish their research is they submit it to a journal that has  
12 an audience of folks that are interested in that, which is  
13 usually other professionals. And then before the journal will  
14 publish that, they send it out to peer review.

15 And then there's also conferences that are attended  
16 by other experts and this sort thing.

17 So that's how the professional sort of academic world  
18 works.

19 Q. And did any of the articles that you reviewed discuss the  
09:49:52 20 impact on revenue received by the recording industry?

21 A. Yes. I mean, the ones I directly cited were all directly  
22 relevant to this question, the 24 -- or whatever it was -- so  
23 between 20 and 30 publications I cited in my reports.

24 Q. And did you observe a general consensus or agreement in  
25 the literature on the issue of harm?

1 A. Yeah. I mean, one of the more recent or latest -- I  
2 forget the precise date of it, reviews of the literature, but  
3 it was -- I believe it was after the 2014, said that they found  
4 26 studies of whether or not there was economic harm to rights  
5 holders, and they found that something like 23 out of those --  
6 out of the 26 studies found significant economic harm.

7 Now, when you say "significant," what you mean is  
8 that you're actually able to demonstrate it within the dataset  
9 using statistical methods to basically sort of pass muster.

09:50:52 10 So it's not like I found evidence, but it's not  
11 statistically significant. So it doesn't mean that's  
12 meaningless, it just means that, you know, it doesn't cross  
13 that higher bar that academics try and set for themselves in  
14 published literature.

15 So when they say 23 out of 26 studies found  
16 significant harm, that's -- you know, I would say, you know, a  
17 demonstration of almost universal consensus in the profession.

18 Q. And did you agree with that consensus?

19 A. Absolutely. And I think all the other evidence I  
09:51:25 20 considered in this matter just goes to confirming that.

21 Q. Have you prepared a slide excerpting one of the studies  
22 you reviewed?

23 A. Yes.

24 Q. Could you tell us about this study and why you've put this  
25 slide here, Dr. Lehr?

1 A. Yeah. This is one of the studies that I cited, and the  
2 title of the study is Quantifying Global Transfers of  
3 Copyrighted Content Using BitTorrent.

4 And it's by Alexandria Mateus and John Peha. And  
5 I've highlighted, you know, excerpts from this. So the first  
6 excerpt is that 10.7 songs were transferred using BitTorrent  
7 for every song sold.

8 And then also, that the vast majority of music and  
9 video content transferred using BitTorrent is copyrighted.

09:52:12 10 And they find that only .55 percent, less than, you  
11 know, 1 percent, about half a percent of the content in  
12 BitTorrent is not copyright infringing and potentially  
13 legitimate.

14 So they conclude that BitTorrent transfers result in  
15 hundreds of millions of copyright violations worldwide per day,  
16 and the copyright holders fail to realize significant revenues  
17 as a result.

18 What these guys did in the study was they looked in  
19 some detail and care at actually what's going on in BitTorrent  
09:52:48 20 traffic. And, you know, it's a fairly comprehensive study, I  
21 think, in doing that.

22 And what they're saying here is essentially this  
23 research says that the number of illegal copies that are out  
24 there -- because almost all these copies that are going by  
25 BitTorrent are illegal, that's what this is saying, is that

1 it's copyrighted material that are being shared over the  
2 BitTorrent network -- it's ten times what the legal sales are.

3 Q. Now, Dr. Lehr, there is a document in front of you,  
4 PX 439.

5 A. Yes.

6 Q. Do you recognize that?

7 A. Yes.

8 MR. GOULD: I'd move to admit PX 439.

9 THE COURT: Any objection?

09:53:32 10 MR. BUCHANAN: Yes, Your Honor, I would -- no  
11 objection.

12 THE COURT: All right. Your exception is noted  
13 previously.

14 MR. GOULD: If we could pull up--

15 THE COURT: The exhibit is received.

16 MR. GOULD: Actually, you know what, I have got a  
17 slide, so it's fine.

18 BY MR. GOULD: (Continuing)

19 Q. Dr. Lehr, what is PX 439?

09:53:47 20 A. This is another one of the, you know, documents that I  
21 reviewed in reaching my opinions. It was, you know, a study  
22 that looked at -- it was another study also looking at some of  
23 the same issues that were touched on in the paper I just saw,  
24 looking at what's actually in BitTorrent traffic.

25 And so, what they did was they only identified out of

1 the torrent files, out of 12,500 torrents analyzed, there were  
2 only two files that they offered -- or two torrents that --  
3 files that offered non-infringing content. So that results in  
4 them including that 99.97 percent of content was infringing.

5 So this is another example of research of the sort  
6 that was relied upon by analysts and academics trying to think  
7 about this question of does, you know, peer-to-peer file  
8 sharing result in piracy that harms rights holders?

9 And, you know, it goes to the point of, you know,  
09:54:52 10 people that actually looked at this, documents what was, I  
11 would say, commonly known by people that were thinking about  
12 these issues at the time that, you know, of course, the  
13 traffic, peer-to-peer traffic is almost all illegal copyright.  
14 Q. So how does this -- how do these two articles and the body  
15 of literature tie in with your opinion that this peer-to-peer  
16 infringement causes economic harm?

17 A. Well, what the peer-to-peer does is it basically makes it  
18 extremely easy. So it is kind of like piracy on steroids.  
19 While piracy did happen and has been a problem forever -- you  
09:55:35 20 know, when people did discs, you know, did copyright CDs, that  
21 just wasn't quite the same thing.

22 But if someone can put on the Internet a copy via  
23 broadband connection, especially via a high-speed broadband  
24 connection a copy, the number of times that can be shared is  
25 potentially unlimited.

1           So the viral nature of file sharing and the way  
2 peer-to-peer networks work means that it's an extremely  
3 dangerous, you know, from the perspective of rights holders,  
4 vehicle for, you know, producing illegal copies.

5 Q.   Now, moving to your second opinion that the quantity is --  
6 you can't quantify the harm. Could you walk us through the  
7 basis for that opinion.

8 A.   Yeah. So the first, you know, opinion is that, you know,  
9 the evidence and, you know, sort of universally the people that  
09:56:37 10 have looked at it, the economists and other analysts, have  
11 concluded that there is a really significant harm to rights  
12 holders.

13           It turns out that, you know, if you want to try and  
14 quantify that in dollar terms, like what is the economic damage  
15 that plaintiffs would suffer in a case like this, that data  
16 just doesn't exist.

17           To an economist trying to estimate something like  
18 economic harm, what you're trying to do is figure out, here is  
19 the way the world exists today, so I know what sales are in  
09:57:11 20 today's world, but what would sales have been in the but-for  
21 world where the piracy problem that I'm worried about did not  
22 exist.

23           So I'm trying to estimate what the profits and  
24 revenues might have been to rights holders in a world where  
25 piracy did not exist. And I fundamentally do not have the data

1 to do that, nor does it actually exist.

2 Q. So there are three points on your slide here. Can you  
3 just walk through and just briefly explain why this data  
4 doesn't exist.

5 A. Sure. So the first issue, problem, if you try to estimate  
6 the revenues -- so I'm trying to figure out how much lower  
7 revenues were as a consequence of the piracy. That's what I  
8 would have needed to have done if I was going to try and  
9 estimate what the economic harm to plaintiffs would be.

09:58:10 10 It was clear to me, after looking at the evidence and  
11 what was available in the literature, that evidence did not  
12 exist. So I didn't attempt to do that.

13 But if you -- the first thing you would have to do is  
14 estimate that Q, how many unit sales would they have sold in a  
15 world without piracy. So to do that, the first thing you have  
16 to do is figure out how many illegal copies are out there as a  
17 consequence of the piracy.

18 So in this case, the data we have is evidence of  
19 infringement using peer-to-peer by subscribers repeatedly, you  
09:58:42 20 know, engaging in infringing activity. We don't observe how  
21 many actual copies were distributed by those subscribers, nor  
22 could we given the way the data was actually collected. So  
23 that at best we have a lower bound estimate of the amount of  
24 infringing activity.

25 So MarkMonitor, which is the principal source of the



1 data, wasn't surveying every Cox subscriber all the time. And  
2 the -- so they wouldn't have known everything that was going  
3 on.

4 And a file, even potentially more important, a file  
5 that is distributed illegally, once it gets out there virally,  
6 how many illegal copies that copy can spawn. You would --  
7 there is no way to precisely estimate that.

8 So that's the Q. You don't know what the Q is. And  
9 the data in the case doesn't allow you to reliably estimate  
09:59:43 10 that, the number of illegal copies.

11 Now, that number of illegal copies isn't -- doesn't  
12 equate directly to the number of sales that would have  
13 happened.

14 Q. Why not?

15 A. Because the second thing you have to know is you have to  
16 know how many of those illegal copies would have -- had they  
17 not existed, would have translated into legal sales.

18 Now, if you say the legal sales would have taken  
19 place at a zero price, then it's okay. But if you say it's a  
10:00:11 20 non-zero price, some of the things that went out there  
21 illegally might not have been bought.

22 So you have to figure out what was the purchasing  
23 behavior of the subscribers, what they would have done if they  
24 hadn't been able to get the pirated copies. And that data  
25 doesn't exist. We don't have detailed data on Cox's

1 subscribers' music-purchasing behavior. So we don't know what  
2 the displacement effect would have been given a number of  
3 illegal sales.

4 So I need to know the number of illegal sales and  
5 then I need to have an estimate, a reliable estimate of the  
6 displacement effect to figure out what the change in Q, the  
7 quantity of units sold, would be.

8 And the third thing is, as I mentioned earlier, the  
9 prices. What would the prices have to have been or could have  
10:00:58 10 been -- would have been in a world without the piracy taking  
11 place. The prices I observe have been driven down because of  
12 the existence of the piracy.

13 So I don't have any of those core elements. So I  
14 can't reliably estimate the revenues that were lost because of  
15 the piracy.

16 Q. So you talked about all this data you don't have. Why  
17 can't you just look at the number of notices that the  
18 plaintiffs sent and estimate damages based on that?

19 A. Well, first off, I'm not here testifying about how you go  
10:01:38 20 from the notices to the details of figuring out what some  
21 number of infringements are. That's not stuff I'm talking  
22 about.

23 But the notices were part of a complex process that,  
24 as I have already said, did not detect, nor could be expected  
25 to detect, every element of infringement.

1           So the number of times, like the subscribers who may  
2 have been infringing, it's reasonable to believe there were,  
3 that might not have been detected. So they've never been --  
4 it's possible no notice at all.

5           And the notices were of an observation that a file  
6 was being made available, a copyrighted file was being made  
7 available at a particular IP address. But it doesn't tell you  
8 how many times that file may have been shared. And, you know,  
9 all the other ways. That data -- no one has. BitTorrent  
10:02:28 10 doesn't have it. Cox doesn't have it. And certainly the  
11 rights holders don't have it.

12 Q. I want to turn to your next opinion about the industry  
13 economics and Cox's revenue and profits.

14           Before we go -- as we go into that, can you describe  
15 a little bit the economic nature of Cox's business as an  
16 Internet service provider?

17 A. Yeah. To think through and understand the financials of  
18 Cox and come to the opinions that I have, you have to  
19 understand a little bit about the nature of that business at a  
10:03:06 20 high level and even at a level with some more detail. And  
21 that's something I have spent a lot of my time doing.

22           I mean, Cox is a provider of telecommunications  
23 network services using a complex network that they have built  
24 up that allows them to offer a range of services that we'll be  
25 talking about.

1           So the three most common or the three most sort of  
2 important of those services we are talking about are their  
3 high-speed Internet access service, or broadband, I'll use  
4 those two interchangeably; their video services or pay  
5 television services; and their voice services or telephone  
6 services. They offer those services and additional ones over  
7 this complex platform that they deploy.

8           Now, that platform is a network that has wires in it  
9 that go by specific houses and businesses. So when they go --  
10:04:02 10 and they have built this network out, Cox has, into 18 states,  
11 I believe, and within those states a number of local markets.  
12 So, you know, towns, neighborhoods, communities where Cox  
13 service and their network is available.

14           They go out and they build that network out, and then  
15 that network is available to basically support the services  
16 they want to sell. And then they have to go out and sign up as  
17 many of the businesses and households that are passed by the  
18 wires that Cox has to the services that those subscribers want  
19 to take. And Cox wants them to buy as many services as  
10:04:39 20 possible.

21           And the typical, for example, residential customer  
22 buys multiple services from Cox at a monthly subscription price  
23 that varies depending on what they purchase from them. And  
24 then Cox provides those services and bills the subscribers a  
25 monthly rate for as long as Cox has those subscribers as

1 customers.

2 So that's sort of the basic business that Cox is in.

3 Q. Now, considering that model and having looked at Cox's  
4 financials, did you form a view or any conclusions about how  
5 Cox does at this job it tries to do?

6 A. Yes. Cox is -- this is a hard thing to do. So not -- big  
7 companies do this. Cox is a big company. And Cox has been  
8 very successful in doing this. Cox is the eighth largest, I  
9 believe, Internet service provider, provider of these kinds of  
10:05:39 10 services in the country. And they -- their network that they  
11 have built out passes something like ten million homes. And  
12 they've signed up something like six million more subscribers,  
13 business and residential subscribers that are in the businesses  
14 and houses that are passed by Cox's network.

15 So I would say they have been very successful in  
16 executing on this business model.

17 Q. Now, before we turn to some of the numbers, what kind of  
18 information did you review to get a quantitative sense of Cox's  
19 success at this?

10:06:19 20 A. Well, I mean, the general description of the business is  
21 something I'm well familiar with. But to understand the  
22 specifics of Cox's business, because it's a privately held  
23 company, I had to get information, you know, in the context of  
24 this proceeding.

25 And some of the information that I've used is their

1 own internal profit and loss statements. So these are their  
2 statements that describe what are the revenues coming in from  
3 the customers by product line, and then what are the costs that  
4 are directly attributable to those product lines that are, you  
5 know, variable. And then also, what are all the fixed costs.  
6 So, what are all the operating costs that are associated. And  
7 then that, you know, down to the bottom.

8 And then after I've done my -- those are the  
9 documents that I considered, and I got that both for their  
10 residential customers when I did my original first report, and  
11 then later, we got additional similar information on their  
12 commercial customers. And that's the principal data.

13 And then after my all reports were finished, we  
14 finally got access to their complete audited, financial audited  
15 statements. A thing that looks like an annual report that  
16 normally would be publicly available and you could download  
17 from the Securities and Exchange Commission site. You know,  
18 that -- the version of the report that looks like that.

19 Q. Talk us through -- talk the jury through, please, if you  
20 could, what you observed and concluded in terms of Cox's  
21 revenues and profits from its residential and business  
22 customers.

23 A. Right. So to make even more concrete what I was  
24 explaining before, you can see that, you know, Cox had revenues  
25 in 2013 of \$9.5 billion. Revenues in 2014 of \$10 billion. For

1 a total of \$19.5 billion.

2 So round numbers, they're basically a \$10 billion  
3 company. And that comports with sort of what you would expect  
4 given sort of what I have already said.

5 The other point to recognize, and this slide  
6 demonstrates, is they're a quite profitable company. So when  
7 you take -- using Cox's financial internal documents, you take  
8 off all the costs, except for taxes and interest that Cox  
9 incurs in realizing those revenues -- so they have to maintain,  
10:08:45 10 you know, a networking engineering department, and marketing  
11 department, and they have to have people doing their accounting  
12 and personnel, take all those costs out, in 2013, they earned  
13 \$4 billion. And in 2014 they earned \$4.3 billion. For a total  
14 of \$8.3 billion.

15 So the profit margin, just talking about the cash  
16 flow that's flowing to the business and that they can then, you  
17 know, use to invest in the business or do other things with,  
18 that's, you know, a margin around 43 percent.

19 Q. So I want to understand a couple of terms you used. What  
10:09:26 20 is revenue just at a high level?

21 A. Revenue was the total receipts they get from their  
22 subscribers.

23 So as I said, they send bills to subscribers, and  
24 some of the subscribers have discounted service for the first  
25 couple of months or whatever. And so, that's all factored in.

1 It's what the customers actually pay. That's the money coming  
2 in.

3 And then money that goes out is what they have to pay  
4 their employees to make this whole engine work and --

5 Q. And what is net profit?

6 A. Net profit the revenues minus those costs. And it's --  
7 here, what net profit is is the operating cash flow. So it's  
8 taking out their operating costs. It's not taking out their --  
9 the interest expenses and some things that, you know,  
10:10:15 10 accountants may use if they're computing something like net  
11 income.

12 Q. And you used another term, "margin." What does margin  
13 mean, and how does that relate to this slide?

14 A. Margin, again, is just a measure of profitability.  
15 There's many ways in which one might assess profitability. So  
16 margin, here, is just very simply net profit divided by  
17 revenue. It gives you an idea.

18 The higher that number is, it tells you, if I get a  
19 dollar in and my margin's really high, I'm going to keep most  
10:10:41 20 of that dollar that I get in and be able to flow it down to the  
21 bottom line, and then use it to build my business or make the  
22 people that gave me the money to run the business happy to go  
23 do whatever they want to do.

24 Q. Now, did you consider any other measure of profitability?  
25 I think this might be on your next slide.



1 A. Well, I mean, one of the -- I mean, when you look at  
2 something like operating -- the operating cash flow, that's  
3 something that, as an economist, when you consider a business,  
4 is very important.

5 And so, if a business is growing and trying to  
6 execute their model, they have to basically keep a bunch of the  
7 money they -- profit they make, so that they continue to make  
8 profit in the future years. So they have to reinvest in the  
9 business. Okay.

10:11:24 10 But if you own stocks or, you know, invest in the  
11 market, there's two ways you can make money. One is the stock  
12 value appreciates and you can sell the stock at a higher value  
13 later.

14 Another way is the company sends you dividends. And  
15 if they send you dividends, you can take that money and do  
16 whatever you want with it. You can go on a vacation, you can  
17 buy a car, you can do whatever you want.

18 So what this is showing is Cox's dividends in 2012,  
19 2013, and 2014. And you can see that they were able to pay  
10:11:59 20 dividends of a billion dollars and more out of their net  
21 profits and still, you know, maintain their business and invest  
22 in their business and grow their business as they thought  
23 appropriate. So this is money they thought they could safely  
24 take out of the business.

25 Now, if you think of a start-up company or something

1 like that, most of the time they're under water because they're  
2 consuming more cash building their business than they're  
3 producing.

4 That's not the case with Cox. Cox is very, very  
5 profitable.

6 Q. And just for clarity, what's a cash dividend?

7 A. A cash dividend basically is a -- you know, you give the  
8 money in cash. You haven't said, oh, here's -- you know,  
9 here's a nice button or something like that that we value.

10:12:43 10 It's actual dollars. This was a billion dollars or more that  
11 they were pulling out of the business to do other things with.

12 And what my concern here is, to understand the  
13 business of Cox and how that operates to, you know, create  
14 value for Cox. I mean, to make that business work.

15 And this is saying that, you know, of the 4 billion,  
16 they don't need 4 billion every year. You know, they're --  
17 they can keep 3 billion in the business roughly and --

18 Q. Do you have an understanding of whether Cox was growing  
19 over these years?

10:13:20 20 A. Yeah, Cox was. Cox was continuing to grow.

21 Q. And how does this cash dividend relate to that notion?

22 A. Well, this is totally separate. This is not money that  
23 they were using to grow their business.

24 Q. They were growing even after paying these dividends?

25 A. Yes, yes. So the other costs, for example, the payment on

1 interest and things like that, the taxes and, you know, other  
2 stuff like that, that's not in the net profit, you know, that's  
3 covered by the other stuff that still allowed them to pay these  
4 dividends.

5 Q. And you say: Cash dividends to its owners. Do you know  
6 who the owners are?

7 A. I don't know specifically. But it's a privately held  
8 company, and as I understand, it's relatively closely held. So  
9 it's the Cox family mostly, and friends.

10:14:06 10 Q. Now, you've been talking about Cox's profitability and  
11 margins. Did you compare Cox's margins and profitability to  
12 any other metrics, to any other industries?

13 A. Yeah. Well, I mean, to -- you know, and it's also  
14 relevant in the context of this case to look at, you know,  
15 who -- what -- how does Cox's business compare to the  
16 plaintiffs'.

17 So, you know, what this slide does is it looks,  
18 again, from the, you know, the publicly available documents for  
19 the plaintiffs. So I have Sony Music, Sony/ATV, Universal  
10:14:41 20 Music Group, and Warner Music Group. And Sony Music and  
21 Sony/ATV are split because Sony Music is the recording company  
22 and Sony/ATV is the music publishing. In the case of Universal  
23 Music Group and Warner Music Group, they've consolidated those.

24 And so, you can see that if you go and look at this,  
25 Cox is an order of magnitude larger, you know, than any of the

1 individual plaintiffs. And if you add up in aggregate the  
2 plaintiffs' revenues, you come up with a number that's a little  
3 bit more than the 10 billion that Cox earned in 2014.

4 What's more --

5 Q. Go ahead, sir.

6 A. Sorry. What's even more revealing is if you look at sort  
7 of what the net profit is -- so the net profit that Cox  
8 realized was 4.3 billion in 2014. And, you know, if you sum up  
9 the 65 million, 174 million, the 514 million, and the 130  
10:15:44 10 million, you come up with a number that's less than a billion.  
11 I forget exactly what it is.

12 But if you compute that, you know, over -- so you  
13 take that billion -- less than a billion over the slightly more  
14 than 10 billion, and you calculate what's the margin for that,  
15 it's 8.6 percent.

16 So you compare the 8.6 percent margin, that's the  
17 difference between dollars they get coming in and how much  
18 they're able to keep, to the 43 percent that Cox is getting,  
19 right? And the reason is, is because the music business has a  
10:16:16 20 lot more operating costs. You know, it's expensive to, you  
21 know, pay for the artists, and the production, and the  
22 distribution rights and all that. And their financial  
23 statements, you know, reflect that. And that's why their  
24 margin is, you know, one-fourth of the margin that Cox is  
25 seeing.

1 Q. So you said that Universal and Warner, as shown here, are  
2 consolidated. Did you mean consolidated financially?

3 A. No. What I meant was they're -- they don't differentiate  
4 or break out separately in their financial statements their  
5 recording business and their music composition business.

6 Q. Report in consolidated financials?

7 A. Yes.

8 Q. And there's a footnote here at the bottom. Could you  
9 explain what that means.

10:17:00 10 A. Oh, well, Cox, as I said, operates in 18 states. So they  
11 don't represent the whole, you know, market for services like  
12 the services Cox offers.

13 Whereas the music -- the plaintiffs in this case, in  
14 the case of Universal Music Group and Warner Music Group, this  
15 represents their global financials. So this is -- they're  
16 competing globally, and this is what they realize. And Sony,  
17 it's their U.S. sales.

18 So it's a little bit of an apples and -- you know, I  
19 mean, in that I'm acting as if these guys are competing for the  
10:17:35 20 same customer market, and they're not.

21 Q. And why did you do this comparison?

22 A. Well, one is because, you know, to just give people some  
23 concrete numbers to understand, when I say that Cox is very  
24 profitable, you can see that in many ways. You can see that in  
25 the amount of money they get. You can see that in the margin

1 they get. You can see that in dividends they pay. And you can  
2 see this by comparison of another industry.

3 This is not to say that the music industry is, in any  
4 sense, a bad industry, you know, earning an 8.6 return here.  
5 It's just saying that Cox is great -- that's a great business.

6 Building a network is hard. But having built the  
7 network, if you're successful in getting subscribers, which Cox  
8 has done, is a great business as long as you can retain those  
9 subscribers.

10:18:24 10 Q. Now, focusing on Cox's business again. Can you unpack a  
11 little bit and explain where its revenues are coming from for  
12 its different products.

13 A. Sure. So now, just so we're clear, I'm talking about the  
14 residential. This slide shows data from just their residential  
15 revenue and profits. And I'm doing that for two reasons.  
16 First, because residential is, by far, the vast majority of  
17 their revenues and profits.

18 But also, because in the DMCA notices, 95 percent of  
19 those relate to residential subscribers.

10:18:59 20 Q. Are you referring to the pie chart in the corner?

21 A. Yes.

22 Q. I want to make sure we all understood that. Could you  
23 repeat it, please.

24 A. Yes. Sorry. The pie chart in the corner is just to  
25 remind us that, you know, of the subscribers, 95 percent -- of

1 the alleged infringing subscriber accounts, 95 percent of those  
2 are residential. So I believe it's especially important to  
3 understand how residential subscribers behave.

4           Although the business subscribers are also very  
5 important because even though there are fewer numbers, there's  
6 a lot more revenue associated with business subscribers on a  
7 per account basis. Which, you know, if you -- the original --  
8 the numbers in revenues were about 10 billion. The total  
9 revenues that are earned by the products, the principal  
10:19:48 10 products that are sold to residential households, is  
11 8.2 billion. This is for 2014.

12 Q. Now, why have you demonstrated this slide showing the  
13 different revenues, profits, and margins by service type?

14 A. Well, this is telling us a couple things. One, is it's  
15 telling us, you know, something about how the residential  
16 subscribers -- the business model works.

17           So the business model, again, is you have this  
18 network that goes by, and then you sell -- and the costs of  
19 doing that, most of those costs are, I got the network by the  
10:20:20 20 building, and I'm ready to sell them services. Then you sell  
21 them as many services as you can.

22           And the three services that are principally bought,  
23 there's some other ancillary ones I won't talk about, are  
24 high-speed Internet or broadband service. And so, the total  
25 revenues for their residential subscribers associated with

1 their high-speed Internet/broadband business is 2.8 billion.

2 They also sell video services to their residential  
3 subscribers, and they get \$4.2 billion for that.

4 And then for their voice services, they sell those  
5 and they get \$1.1 billion for that.

6 Now, the typical subscriber of Cox purchases multiple  
7 services. So I believe in 2014, two-thirds of their  
8 subscribers bought at least another service, one of these other  
9 services.

10:21:10 10 42 percent of the subscribers bought all three. So  
11 the typical way in which subscribers buy services and the way  
12 in which Cox wants to sell them to subscribers is to get them  
13 to buy this, they sometimes refer to it as the Triple Play. So  
14 you sell them this.

15 The other thing to notice about this is that the  
16 margins differ by these services. And the calculations of  
17 these margins and the net profit is based on Cox's internal  
18 profit and loss statements by product segment. So this is the  
19 way they think about it. It is consistent with the investment  
10:21:49 20 community, Wall Street analysts think about it, and other folks  
21 that analyze this industry do.

22 But these numbers are calculated using Cox's own  
23 internal profit and loss statements. And what it shows you is  
24 that they view their high-speed Internet service as the highest  
25 margin, most profitable of these services. It has a margin of



1 59.8 percent.

2 The next most profitable service is their voice  
3 service, which has a margin of 52.5 percent.

4 And then the least profitable of these services is  
5 their video or television service, which still has a margin of  
6 21.5 percent. Compare that to the 8.6 percent that the record  
7 industries get. The reason it's 21.5 percent and the reason  
8 the video business in that sense is more expensive for Cox is  
9 because Cox has to pay for the programming it delivers to the  
10 subscribers on a per subscriber basis.

11 So some of that \$4.2 billion is going to the -- you  
12 know, people like HBO and other folks that are providing the  
13 programming.

14 Q. Now, Dr. Lehr, does the understanding of this business and  
15 Cox's financials tie into your next opinion about Cox's  
16 economic incentives in this case?

17 A. Yeah, absolutely. You can see that the basic business  
18 here is to acquire subscribers, sell them a bunch of services,  
19 and keep them on your network. So Cox has a strong incentive  
20 to do that.

21 And Cox likes to keep all subscribers that are  
22 profitable on its network. As in, if you pay your bills,  
23 you're profitable, in this business. And there is evidence  
24 from Cox's own billing records that keeping infringing  
25 subscribers on its network was very profitable to Cox.

1 Q. Now, could you just walk through the bases for your  
2 opinion on incentives here, and then we'll go through each one.  
3 So at this step just touch on them, please.

4 A. Sure. So first off, there is evidence in this case about  
5 the, you know, subscribers who are -- have been identified as  
6 infringing. And those subscribers, Cox billed \$307 million, so  
7 we're talking about a lot of money, between February 2013 and  
8 2016.

9 Two, there is evidence from multiple sources that  
10 suggests that Cox infringers actually paid more for Internet  
11 service on average and are likely to have purchased more  
12 expensive Internet plans than your average subscriber.

13 Three, that Cox saved costs by not addressing the  
14 copyright infringement. I talked a little bit about that at  
15 the very beginning, you know. And so these -- this is  
16 referring to the costs that Cox avoided as opposed to the costs  
17 that the plaintiffs incurred in trying to do their -- you know,  
18 what they could to fight privacy. But Cox saved costs by not  
19 addressing copyright infringement.

10:25:05 20 And that by not addressing copyright infringement,  
21 Cox was able to maintain a larger subscriber base over time  
22 than they would have had they been more aggressive in dealing  
23 with the infringement by subscribers on the Cox network.

24 Q. So let's turn to your first opinion that Cox billed  
25 subscribers 307 million in the time frame you've identified.

1 Can you -- what information did you consider in  
2 forming this opinion?

3 A. So I actually -- in this case I actually got, it was  
4 closed, a subsample of Cox's data about the levels of  
5 infringement. So excerpts from their CATS system that  
6 documented the -- you know, matched the tickets to subscriber  
7 accounts from 2012 to 2014.

8 So I know what -- how many tickets and when those  
9 tickets arrived for those subscribers in that data.

10:26:11 10 I also received for that subsample of subscribers  
11 from Cox's billing system all of the bills that were billed and  
12 paid by Cox subscribers identified in the CATS data, that  
13 subsample we got, from 2012 to 2016.

14 So I have like month by month this is how much they  
15 paid for the services they got. So I had that data and I  
16 matched that up.

17 And when you match that data up -- there were a few  
18 missing records, you know, in terms of things, but basically  
19 there were 57,279 subscribers that were identified as  
10:27:05 20 infringing. In other words, they had received at least one  
21 ticket, for which I had billing data.

22 Q. And for those 57,000-odd subscribers, what did you  
23 determine Cox billed those customers?

24 A. Well, then having matched those datasets up, you can go  
25 through and you can sum the revenue over whatever period you

1 want. And the period that I summed it over for this table was  
2 from February 2013 to December 2016. And that number for all  
3 those subscribers in that -- those 57,279, it is \$307 million  
4 that were billed.

5 Q. Now, this time frame that you've identified here, why did  
6 you use that time frame?

7 A. I used that time frame because I think it's -- one, it's  
8 the claim period in this case and it's illustrative of this. I  
9 could have used a different time period. I mean, I could have  
10:28:02 10 shown even more, the numbers would be bigger.

11 And I didn't -- I wouldn't -- I didn't -- I stopped  
12 at 2016 because that's all the data I had. I believe a number  
13 of these subscribers were still subscribers and were still  
14 producing revenue. So that would drive the number up if I had  
15 been given data up to the present.

16 And presumably also, since the ticket data ends at  
17 2014, a number of those subscribers received additional tickets  
18 and it's possible that additional, you know, subscribers would  
19 have been provided.

10:28:32 20 So this number here is what the data is. I am  
21 showing you what's in the data and give you an idea of what  
22 it's telling you.

23 Q. I'll turn to 3+ and 5+ in a moment. But I want to  
24 understand what do the amounts that Cox billed and collected  
25 from these customers tell you about Cox's incentives or

1 benefits in respect to infringement or infringing customers?

2 A. Well, there is various standards one might have to  
3 determine, you know, what's infringing. But this is evidence  
4 that I believe -- I think the evidence in this case  
5 demonstrates credibly that Cox knew they had a significant  
6 number of infringing subscribers on their network.

7 And we will talk about other things. Like for  
8 example, they knew they had a lot of peer-to-peer traffic on  
9 their network. And they also knew that peer-to-peer traffic is  
10 almost all infringing traffic.

11 But this is data from their own billing system of  
12 subscribers that were identified to them by the RIAA in the  
13 messages sent to them as these are subscribers engaging in  
14 infringement. And Cox continued to bill these subscribers even  
15 though they were infringing, deriving a direct financial  
16 benefit from these subscribers that is in the hundreds of  
17 millions of dollars.

18 Q. Why have you included in your slide here, Dr. Lehr, an  
19 entry showing direct infringers with just one ticket? How does  
20 that demonstrate Cox's economic incentives versus a direct  
21 infringer who had just one ticket in Cox's system?

22 A. Well, first off, I think to understand what's going on  
23 here, you ought to have some sense of the dataset. So the  
24 dataset begins with infringers that have one or more tickets.  
25 So I think that's the first reason you absolutely want to show

1 it.

2 But the other is because you're trying to get a  
3 handle on evidence that shows that Cox actually benefitted,  
4 that its incentives -- what the theory tells you comports with  
5 what the evidence actually shows and is demonstrated by Cox's  
6 actual behavior.

7 So the theory tells you that a business operates to  
8 generate profits and do the right things. And so, it's in  
9 Cox's incentive to retain profitable subscribers.

10:31:00 10 Cox, indeed, retained profitable subscribers. And it  
11 chose to retain and earn significant revenues and profits from  
12 subscribers that were identified as infringing.

13 Now, you know, whether or not these -- you should  
14 say, oh, you know, those subscribers that only got one ticket  
15 weren't really infringing, I'm not arguing with that. Although  
16 the data suggests that the fact that they got one ticket, given  
17 what I said earlier and given what we know about the nature of  
18 the sampling of the data, means that there is maybe a bunch of  
19 people that never got a ticket that were infringing merrily.

10:31:42 20 They got one ticket and they infringed a lot more, but didn't  
21 get subsequent tickets. And we don't know how many  
22 infringements are associated with the subscriber that got  
23 identified.

24 So I'm not trying to tell you how to map to a number  
25 of infringements. That's not my testimony here. It's about

1 what is their economic incentive to knowingly tolerate having  
2 infringing subscribers on their network.

3 And I believe the \$307 million gives you an idea that  
4 they had a very large economic and financial incentive from  
5 that.

6 Q. Now, when Cox would have considered the value of these  
7 direct infringing subscribers in the context of this economic  
8 incentive opinion, would Cox have considered just some of the  
9 value of that customer, or more of the value of that customer,  
10:32:27 10 or the entire value of that customer?

11 A. Cox is in a continuous business of trying to get  
12 customers, trying to hold on to the customers it has. And  
13 that's especially valuable because it costs money to acquire  
14 customers. And if you already have them, it is much more  
15 profitable to keep them. And so Cox was continuously doing  
16 that. And so, as I said, the economic basic data shows that.

17 This data shows that in fact they were capturing  
18 significant revenue from infringing subscribers. And the fact  
19 that I catch you at some certain point in your career doesn't  
10:33:05 20 mean you weren't infringing before. I don't have ticket data  
21 about what -- some of these subscribers that may have been  
22 subscribers before 2012. I only have data of these subscribers  
23 and the tickets they received between 2012 and 2014. That's a  
24 sliding window. And I don't have the revenue from before.

25 So, these subscribers and the benefit to Cox is

1 greater than the evidence that I have here.

2 Q. Now, looking again at the time frame. If you had limited  
3 this to just the claim period, February 2013 to November 2014,  
4 would that impact your opinion?

5 A. Well, it wouldn't impact my opinion that Cox had a very  
6 significant economic benefit. It would change the numbers  
7 because, for example, it would make the billing charges that  
8 are reported here go down.

9 And just one other point here. These numbers are the  
10:33:58 10 billing charges. The evidence shows and the testimony by Cox  
11 is that the actual revenues received by Cox were almost  
12 99 percent of what was billed.

13 So it's not like this is what was billed, but maybe a  
14 bunch of these people didn't pay their bills. No, most of  
15 these people did pay their bills. And so, the difference  
16 between what was actually received and the billing charges,  
17 it's very close.

18 Q. Okay. So I just want to make sure we understand. What  
19 does the 3+ and 5+ show?

10:34:36 20 A. So, again, my purpose with this is to sort of give you  
21 some sense of what is going on in the data and what we see.

22 So if you say, take that dataset and then only look  
23 at the total billings associated with the subset of subscribers  
24 that had three or more DMCA tickets, the 57,279 subscribers  
25 goes down to 31,514 subscribers. And then the billed charges



1 also goes down to 208 million.

2 And then if you ask the question about, okay, well,  
3 what about 5+ DMCA subscribers, that number goes down to 20,189  
4 subscribers, and their total billed charges were \$164 million.  
5 So, you know, still a very large number.

6 Q. And so, the 5+ is direct infringers who received -- are  
7 there 20,000 direct infringers with 5+ tickets?

8 A. Identified in the subsample of total infringements by the  
9 RIAA that is already, you know, by all reasonable estimates  
10:35:45 10 expected to be a subsample of the total amount of infringing  
11 activity and infringing subscribers that exist on Cox's  
12 network.

13 Q. You talked earlier, sir, about the bundling of products.  
14 How does that factor into this analysis?

15 Can you tell the jury what kinds of services the  
16 customers represent in this slide, subscribed to and paid for.

17 A. Well, this, again, is looking at all the services those  
18 subscribers paid for. So it's not just looking at, you know,  
19 what revenue did they get from these subscribers associated  
10:36:16 20 with their high-speed Internet service. Because that's not how  
21 the service is sold.

22 Customers buy a bundled service. When you buy a  
23 bundled service, you get a different price. In fact, you get a  
24 discount. And consumers want to buy bundled services because  
25 it gives them one point of contact, because it's simpler, they

1 get a lower price. And that's how Cox wants to sell the  
2 service.

3 And typically when subscribers move, if they decide,  
4 oh, I don't like this, they move often everything.

5 So the reason it's appropriate, I believe, to look at  
6 the total bills to these customers is because that represents a  
7 measure of the value to Cox of retaining these subscribers on  
8 its network.

9 Q. Did you consider any of Cox's internal writings or e-mails  
10:37:08 10 or communications in connection with this opinion that Cox had  
11 an economic incentive to tolerate infringement?

12 A. Sure. So like I said, from the basic number, they have an  
13 incentive. But their internal documents, some of which -- you  
14 know, when I was sitting in court the other day, I heard  
15 testimony about -- you know, showed that when they thought  
16 about like whether or not they should address the  
17 infringement -- like whether or not, for example, they should  
18 terminate particular subscribers, they definitely considered,  
19 you know, how profitable these subscribers were.

10:37:41 20 So these are excerpts from two e-mails. One, the  
21 first one from March 27, 2014, from Joe Sikes who worked in  
22 their -- you know, the group that was supposed to be addressing  
23 copyright abuse. He said: This customer pays us over \$400 a  
24 month. And if we terminate their Internet service, they will  
25 likely cancel the rest of their services.

1           So this is a statement from Sikes saying they  
2 recognize what was commonly known in the business, that  
3 basically you sell and attract customers on the basis of a  
4 Triple Play.

5           And also, it's worth noting this guy is paying over  
6 \$400 a month. The average revenue captured from the average  
7 subscriber at Cox was like \$130 per month in 2014. This is  
8 \$400. So this more than, you know, a regular number.

9           And so, don't terminate this subscriber, that's what  
10:38:31 10 this e-mail tells me they were saying.

11           The second one also from him is -- well, this is an  
12 e-mail. This is a communication that was documented, is  
13 talking about the soft termination.

14           So Cox did have, you know, a plan they said was how  
15 they dealt with copyright abuse. And that called for  
16 terminating subscribers after some number of messages and back  
17 and forth.

18           But what they actually did was, evidence suggests is  
19 they would -- if they terminate a subscriber, they wouldn't  
10:39:07 20 actually like -- basically, okay, that subscriber is no longer  
21 ours, you know, get them out of the system.

22           No, they would basically turn off his service and  
23 then turn it right back on again. That was what they meant by  
24 soft termination.

25           And it says: For DMCA, we don't want to lose/loose,

1 you know, finger typing, you know, the revenue.

2 So basically they're caring about how much revenue a  
3 subscriber is delivering, how profitable a subscriber is, when  
4 they are evaluating whether or not they should adhere to their  
5 own public statements of what they do about copyright  
6 infringers. And --

7 Q. Now -- I'm sorry, I didn't mean to interrupt.

8 A. Yeah, sorry. You know, he says, it's a new policy, this  
9 soft termination is a relatively new way for them to not have  
10:39:55 10 to deal with losing customers who are actually -- you know,  
11 that they have knowledge of, significant knowledge of being  
12 repeat infringers.

13 Q. Now, we looked at the aggregate value of the direct  
14 infringers in a slide a couple moments ago. Did you also  
15 consider the value of individual subscribers that Cox would  
16 have considered in forming your view of economic incentive to  
17 tolerate infringement?

18 A. Yes, I did. So when I described that dataset, visualizing  
19 what that looks like might be a little bit problematic for  
10:40:34 20 people. So you can look at individual records. I mean, if you  
21 really want to, you can look at 57,000 records that have month  
22 by month by month by month the revenues and when the tickets  
23 came in.

24 But I've -- you know, just to give you an idea of  
25 sort of what some of the customers that are in that dataset

1 looked like, I pulled a couple of examples. And I pulled  
2 examples for subscribers that had at least 13 tickets  
3 because -- you know, as I'll explain in a minute. So this --

4 Q. So, Dr. Lehr, can you explain for us what's shown in this  
5 slide 17?

6 A. Okay. So this chart is just showing by month -- so months  
7 are on X axis, the lower axis going from 2012 to 2016. And  
8 then on the Y axis is showing you dollar amounts. And the cap  
9 here on this slide is \$250. And so, it's basically showing the  
10:41:30 10 cash flows by month.

11 And then it's -- I've marked out in these black flags  
12 highlighted when in the dataset it shows they had received a  
13 certain number of tickets.

14 So this customer is identified as Customer ID  
15 580702666207, was a residential subscriber that in the  
16 dataset -- within the dataset from 2012-2014, had received 101  
17 tickets associated -- DMCA tickets that were in the CATS  
18 database that Cox maintained. They had received the fifth  
19 ticket already by early in 2012, and the 13th ticket already  
10:42:14 20 relatively early in 2012.

21 Q. And why did you highlight those ticket numbers, the 13th  
22 in particular?

23 A. Well, there's some discussion about what Cox's graduated  
24 response or way of dealing with this was. And one of -- you  
25 know, a later version of this was that, well, after 13 tickets,

1 this is a customer that, you know, we think should be  
2 terminated. And then, you know, we -- you know, the other one  
3 says, they had this sort of soft termination process. But the  
4 details of that, that changed over time.

5 But basically, even by Cox's admissions, it's hard to  
6 argue that a subscriber that has gotten 13 tickets, Cox is --  
7 doesn't think is a repeat infringer, you know, and that they  
8 don't have a knowledge of this. Yet they're continuing to bill  
9 that subscriber. They could have been billing this subscriber  
10:43:00 10 since before 2012. They were certainly billing them through  
11 this period of time.

12 But what I'm showing you here in these bars is  
13 starting in February 1, 2013 -- and you can see in each month,  
14 those bars, and they're relatively flat, around \$200. There's  
15 one out here where there's an arrow, that means that it was --  
16 that month, they billed that subscriber more than \$250 and  
17 something up there.

18 But that if you add up all those bars in there, that  
19 subscriber was billed \$8,594 by Cox.

10:43:34 20 Q. So this is just one residential subscriber?

21 A. This is one residential subscriber.

22 Q. So how does looking at one residential subscriber tie into  
23 your earlier opinion about the aggregate value of all of the  
24 direct infringers?

25 A. Well, you can -- you know, there's a number like this for

1 each of the different subscribers. And there are some that  
2 billed lower amounts and some that billed higher amounts. And,  
3 you know, this is a subscriber that billed a fair amount.

4 It turns out that this amount is not that different  
5 than sort of what you might think the average value of  
6 subscriber would be over their lifetime. You know, it's order  
7 of magnitude. It's okay, it's a little bit more valuable. So  
8 this is -- you know, this also would go to a thing of like,  
9 geez, a 101 ticket subscriber also billed \$8,594 in the  
10:44:25 10 subsample of the data that I'm showing.

11 You know, that shows this is an infringing subscriber  
12 that Cox is deriving a direct financial benefit from. And they  
13 were close to 60,000 subscribers that have a different number  
14 like this.

15 But, you know, you look at them and I showed other  
16 ways to think about that with the --

17 Q. But this is a residential. Did you consider a couple of  
18 business customers to demonstrate?

19 A. Yeah, the business -- yes, I did, and the next one is the  
10:44:48 20 business subscriber. The business subscribers were, as I said,  
21 a smaller number, but they account for a lot more dollars per  
22 account typically. And this one was one of the observations  
23 that had one of the highest numbers of tickets in the whole  
24 dataset to give you an idea.

25 So this one got eventually 4,074 tickets. And they

1 also had received their 13th ticket by early in 2012. And this  
2 particular account is a reseller of Cox's broadband services.  
3 So it might -- you know, it could be like one of these like  
4 WiFi resellers that's selling, you know, access. Cox billed  
5 that customer \$706,000.

6 And if you look at this, there are some things that  
7 look a little strange. So you see these arrows like around  
8 2015, and then the numbers drop way down. We don't know  
9 precisely what's going on there. But what it looks like is  
10:45:48 10 that this customer prepaid for like a year of service. And so,  
11 they didn't get billed in subsequent months because they had --  
12 that's sort of what I would interpret that means.

13 But this is what the data looks like.

14 Q. And did you look at another business customer?

15 A. Sure.

16 Q. And what does this show us?

17 A. Well, this just shows you, again, this turns out to be a  
18 fraternity, surprise, surprise, that had 67 tickets and had  
19 gotten its 13th ticket in 2012, also. That Cox billed, you  
10:46:18 20 know, from February 2013 to 2016, \$12,525 to this account, you  
21 know. So --

22 Q. And why did you select these examples, Dr. Lehr?

23 A. Because I understand there has been testimony here about,  
24 you know, characterize the nature of their business customers  
25 and their residential customers. And the fact of the matter



1 is, is that Cox wants to sell service to all the customers that  
2 it can make money from and is profitable. That's a normal  
3 business, you know, proposition, and Cox does that.

4 And it sells it to its infringing customers, and many  
5 of its business customers and many of its residential customers  
6 are, you know, all kinds of different businesses, and there's a  
7 lot of heterogeneity. The thing that's clear is that the vast  
8 majority of their customers, including their infringing  
9 customers, are highly profitable to Cox. Some are more  
10:47:16 10 profitable than others. But almost all of them are profitable  
11 to Cox.

12 Q. Now, I want to turn to your next opinion, Dr. Lehr, that  
13 repeat infringers are --

14 THE COURT: Let me stop you there.

15 The -- let's take our morning break now. So let's  
16 take 15 minutes and we'll come back and continue our testimony.  
17 Thank you all.

18 NOTE: At this point the jury leaves the courtroom;  
19 whereupon the case continues as follows:

10:48:10 20 JURY OUT

21 THE COURT: All right. I got the signal from one of  
22 the jurors that it was time for a break.

23 Anything before we go?

24 All right. Let's take 15 minutes then. We're in  
25 recess.

1 NOTE: At this point a recess is taken; at the  
2 conclusion of which the case continues in the absence of the  
3 jury as follow:

4 JURY OUT

5 THE COURT: All right. Joe, let's get our jury,  
6 please.

7 NOTE: At this point the jury returns to the  
8 courtroom; whereupon the case continues as follows:

9 JURY IN

11:09:45 10 THE COURT: All right. Please be seated.

11 Mr. Gould, continue, sir.

12 MR. GOULD: Thank you, Your Honor.

13 BY MR. GOULD: (Continuing)

14 Q. Dr. Lehr, did you reach any conclusions about the relative  
15 value and benefit to Cox of retaining repeat infringing  
16 subscribers?

17 A. Yes, I did. There's -- I considered several types of  
18 evidence to -- regarding this matter.

19 Q. And could you walk us through the basis for this opinion.

11:10:11 20 A. Yeah. First off, when Cox sells its broadband service, it  
21 doesn't have just a single, you know, broadband service. It  
22 offers different tiers. You know, like a -- you know, a low  
23 tier service that's less expensive, provides a lower data rate  
24 and tells the customers that, you know, their data allowance is  
25 going to be less. And that's suitable for people that are

1 going to be really light broadband users.

2 And then it has higher tiers. And the higher the  
3 tier, the higher the price for the service, the more you get.

4 So it's like a lot of things. So it is sort of if  
5 you want to get a fully-loaded car, you pay more for the  
6 extras. You want to have broadband that runs really fast and  
7 has a big data cap, supports multiple users in your household,  
8 these sorts of things, you get a higher tier service. So --

9 Q. You talked about data, but you also just mentioned speed.

11:11:08 10 What does this -- how does the speed impact the tiers?

11 A. Well, they --

12 Q. Or relate to the tiers.

13 A. They -- when they define the nature of the service, they  
14 also tell you what its likely performance is going to be, you  
15 know, so what -- they'll say a data rate up to this certain  
16 speed, and sort of what's the average data rate you could  
17 expect.

18 And so, for certain activities, for example,  
19 downloading files, having something like BitTorrent work and  
11:11:34 20 having a usable experience, you need -- the faster your service  
21 is, the faster the files will download, the better the  
22 experience you'll have if, for example, you're using it to  
23 infringe, which is what it's principally used for, and the  
24 better the experience other subscribers in the BitTorrent, you  
25 know, world will have when they pull the file from you, you

1 know.

2 So if you try to basically, you know, download a file  
3 and the connection is too small, it's like trying to drive on  
4 the highway in a Model T Ford, you know. It's not going to be  
5 a pleasant experience.

6 You know, whereas if you have a very fast speed  
7 service, you'll download files quickly, you can download more  
8 of them. And you'll also, you know, have -- it won't interfere  
9 with other things that you're doing.

11:12:23 10 Q. Now, on this notion of -- the second and third point: P2P  
11 consumes more bandwidth and was a key driver of Cox's  
12 bandwidth.

13 Did you prepare a slide showing some of the  
14 information you considered?

15 A. Yeah, I did. I mean, what's important to understand is  
16 that it -- you know, the broad -- the companies that provide  
17 broadband service have to manage their network and provision  
18 their network for the peak traffic loads. And they also want  
19 to look at sort of what people are doing and what -- you know,  
11:12:55 20 what kind of services they have so they can give those  
21 customers the experience those customers, you know, want and  
22 expect.

23 And so, they look at the different types of traffic.  
24 And if you have someone that all they're doing is e-mail  
25 occasionally, they're not moving a lot of data and they're

1 not -- they don't need a very fast high speed service.

2 If someone's doing something like peer-to-peer,  
3 that's one of the most intensive -- bandwidth intensive  
4 services, both on the upload and the download, that broadband  
5 subscribers do.

6 And this slide is -- you know, pieces out of a  
7 consultancy report that was prepared by this company, inCode  
8 that, you know, provided advice to Cox on sort of, you know,  
9 what they should be expecting in the future, what traffic  
11:13:45 10 looked like in the Internet, what traffic looked like, and what  
11 other, you know, broadband providers around the country were  
12 doing.

13 And what this one says is basically what I've been  
14 saying. Is that peer-to-peer is the most bandwidth intensive  
15 category. And this one shows that, you know, peer-to-peer  
16 households were 13 percent of all broadband households. Which  
17 is a much higher number, for example, than the 60,000  
18 subscribers that have been identified here relative to the  
19 4.5 million broadband subscribers that Cox had.

11:14:19 20 So 60,000 over 4.5 million is well less than  
21 13 percent. Which would suggest and is consistent with the  
22 inference I make that we were only observing a subset of the  
23 actual infringement that was happening on the network.

24 But this is -- this one is showing that this is a  
25 heavy use thing.

1 Now, the lower chart is showing the forecast that  
2 these consultants prepared for sort of the typical household's  
3 monthly usage. And so, there are three lines here. There's a  
4 yellow line, a red line, and a green line. And in its models  
5 for coming up with these forecasts, it characterizes what these  
6 firms -- you know, what these types of households do.

7 So the yellow lines are households that are doing --  
8 you know, using the Internet relatively lightly. And their  
9 bandwidth demand is relatively low. And they're candidates for  
10 this Starter or Essential tier, the lower priced services, you  
11 know, these lower dark blue bands that run across.

12 But if you're in the red band, you need to be in the  
13 Preferred tier.

14 And if you're a green type of customer, you need to  
15 be the Premiere band or the Ultimate tier because your  
16 utilization doesn't fit with the experience you have.

17 Now, the users of peer-to-peer are most likely to be  
18 in this green band or the red band, but certainly not in this  
19 yellow band.

11:15:39 20 So just understanding the character of what  
21 peer-to-peer is and what people are doing, and understanding  
22 that peer-to-peer is almost all infringing activity, Cox is,  
23 you know, listening to and knows -- this is evidence that Cox  
24 internally knew that the customers that were doing peer-to-peer  
25 were more likely to be customers and candidates for its more

1 expensive broadband services.

2           So that's a piece of evidence. That's some of the  
3 evidence that goes with the general understanding of how the  
4 business operates.

5 Q. And how does this tie in, Dr. Lehr, to your opinion that  
6 Cox had an economic incentive to tolerate infringement?

7 A. Well, these customers that are providing and are in the  
8 higher tier services are more profitable than the lower tier  
9 services because almost all the costs of providing the service  
11:16:28 10 to the customers is fixed, it doesn't really depend upon the  
11 actual use of the customers.

12           So, for example, when customers are heavy users, they  
13 may not be heavy users during the peak period, which is when  
14 they size the network.

15           It's like you figure out how big a pipe do I need  
16 during my busiest hour to make sure that the customers that I  
17 promised service to get the service they expect. But if  
18 customers use that pipe when it's not particularly busy, then  
19 that doesn't cost me anything because I have the pipe there  
11:17:00 20 anyways.

21 Q. Now, did you have any access to Cox data that reported the  
22 actual tier, the actual tier that the direct infringing  
23 subscribers in this case subscribed to?

24 A. No, I don't, because the ICOMS billing data just says what  
25 they were billed, but it doesn't tell me what tier those

1 customers were in. And so, I didn't have that data, but I do  
2 have the ICOMS data and the ticket data. So there are things I  
3 can infer from that.

4 Q. So just remind us, sir, what's the ICOMS data?

5 A. The ICOMS data is the internal billing system. So they  
6 keep this for all their subscribers. But, you know, the subset  
7 of the data we got was for those subscribers who had been  
8 identified as infringing subscribers in the CATS data with one  
9 or more DMCA tickets. And then we had their revenue payments  
10 from 2012 to 2016.

11 Q. And were you able to look, sir, at the Cox billing data  
12 for the direct infringers in this case and draw conclusions  
13 about their relative value?

14 A. Yeah. So one of the things you can do is you can say,  
15 let's look at the data payments. So not all the revenues they  
16 billed, but the data payments which shows up in two different  
17 elements within the dataset for each customer. And you can  
18 say, what was the average of only those subscribers, the  
19 average billing per month for only those subscribers that  
20 received one to two tickets? And we can -- can we compare it  
21 to subscribers that received more tickets.

22 And so, for example, can we compare it to subscribers  
23 who got 20 or more tickets? So if you got 20 or more tickets,  
24 the evidence is showing you are, by the evidence, assuming the  
25 evidence straightly maps directly to your infringing behavior,



1 that you're a heavier infringer.

2 When you do that comparison and you apply statistical  
3 tests, you find that there is a statistically significant  
4 increase in the data billed and revenues paid by the more heavy  
5 infringers.

6 So this is data from a limited subsample of Cox's own  
7 internal billing of these infringing subscribers that have been  
8 identified as infringing that statistically shows that there is  
9 a large, 8 percent increase in the data billings to those  
10 subscribers.

11:19:30

11 And that, you know, goes as consistent with the other  
12 stuff, stuff their internal documents and what you would  
13 otherwise infer.

14 Q. What do you mean by statistically significant?

15 A. You apply statistical tests and say, given the size of the  
16 sample I have and the variability in that sample, is this a  
17 difference that looks as if it could be explained as just  
18 random, or does it look like it's actually, you know,  
19 statistically significant.

11:19:56

20 Q. And it looks like -- the 8.4 percent increase, what  
21 charges does that relate to?

22 A. That's just the charges associated with their payment for  
23 data services.

24 Q. And it looks like it's about a six-and-a-half or so dollar  
25 incriminate. \$6 doesn't seem like that big of a difference.

1 Why does that matter here?

2 A. Well, first off, you know, as an economist and someone who  
3 cares about looking at the data, it is statistically  
4 significant. So that matters. 8 percent is a big difference.  
5 That is more an trivial amount.

6 And six bucks does make a difference. It makes a  
7 difference to individual subscribers. I would certainly care  
8 if my bill was \$6 more or less for this.

9 And if you have 60,000 subscribers that there might  
11:20:45 10 be this kind of difference or incentive, or, you know, some  
11 number of subscribers -- you remember, Cox is dealing in  
12 subscriber numbers that are in the millions, hundreds of  
13 thousands, tens of thousands. You multiple that, that's a big  
14 number. That's a big additional incentive.

15 It's not like the subscriber that charges 43 bucks or  
16 even 30 bucks a month in data services isn't profitable for Cox  
17 and Cox doesn't want to retain that subscriber. It's just that  
18 they really want to retain these subscribers that are more  
19 valuable. And if they're higher infringing, it looks like  
11:21:19 20 they're valuable.

21 Q. How does that tie into your opinion that Cox benefited  
22 from retaining these direct infringers?

23 A. Well, it speaks to the economic incentive that Cox had to  
24 retain, you know, repeat infringers on its network even when it  
25 knew, you know, that it had -- these were repeat infringers,

1 and that it's incentives were greater when these repeat  
2 infringers -- there is evidence suggesting that they were even  
3 heavier infringers.

4 Q. I want to move to the next part of this opinion.

5 You said that Cox saved by not addressing  
6 infringement. What do you by that, sir?

7 A. Well, I talked a little bit about that in my opening  
8 statement. So had Cox addressed the infringement more  
9 aggressively, you know, they would have probably had to deal  
11:22:10 10 with more customer service calls. They would have had to mail  
11 more notices and had more interactions to deal with  
12 subscribers. They would have incurred direct costs associated  
13 with the response.

14 They probably couldn't have gotten away with reducing  
15 the personnel of the department that was dealing with the abuse  
16 stuff, as they actually -- as I understand they actually did.

17 But, you know, so they would have incurred additional  
18 costs.

19 Q. Were able to quantify the costs saved by Cox by not  
11:22:44 20 addressing the infringement?

21 A. I wasn't able to quantify these because, first off, I'm  
22 not offering an opinion here about what more and specifically  
23 Cox should have done. And what Cox specifically might have  
24 done would affect what the incremental costs would have been.

25 But certainly they should have done more than they

1 did do. My opinion is that their economic incentive was not to  
2 do anything, that's what I am testifying about. And part of  
3 that is to avoid the costs, but I don't have an estimate of  
4 what those costs would have been.

5 Q. And moving to your last point, Dr. Lehr: Cox maintained a  
6 larger subscriber base.

7 How does this tie into your economic incentive  
8 opinion?

9 A. Well, you know, in any sort of business like this, there  
10 is a certain amount of churn. Customers move, customers leave,  
11 and sometimes you have an incentive to get rid of customers.

12 In my comments today I have emphasized that Cox has a  
13 strong financial economic incentive to retain subscribers on  
14 their network that are profitable.

15 So Cox doesn't want to retain subscribers on their  
16 network that are not profitable.

17 And so, it's also worth looking at, was Cox willing  
18 and able without, for example, rocking the boat of their  
19 general cost structure, able to terminate numbers of  
20 subscribers when it wasn't in their interest.

21 And so, I looked also at Cox termination behavior  
22 between 2013 and 2014. And I did this for a couple reasons.  
23 First off, the evidence shows that between 2013 and 2014, Cox  
24 was willing to terminate and did terminate over 600,000  
25 subscribers for non-payment of their bills. 619,711

1 subscribers were terminated.

2 Of those, 597,796 were residential subscribers, and  
3 21,915 were business subscribers.

4 So like any business, if you're selling to someone a  
5 repeat service and they stop paying their bills, the reasonable  
6 thing to do is stop selling them service. And Cox does that.  
7 Cox has to do that on a fairly regular basis because not  
8 everybody pays their bills. This is on the order of 25,000 a  
9 month, is sort of what their terminations are.

11:25:10 10 And they were able to do that level of terminations  
11 and still come up with the profit and loss accounting data that  
12 I looked at.

13 So terminating customers, you know, at some number,  
14 you know, that's below 25,000 a month, is probably not going to  
15 move their costs much because they've accounted for that.

16 It's also worth comparing that to what they actually  
17 did for copyright infringement. So over that period, they only  
18 terminated 32 customer accounts. 32 of them were residential,  
19 0 were business.

11:25:47 20 And of those 32, I believe the ones that are  
21 associated with the 60,000 notices, roughly 60,000 notices that  
22 are associated with the RIAA, was 13. So 13 of something like  
23 57,000, that's all the terminations they did for copyright.

24 So this is additional evidence that I believe  
25 supports the contention that Cox is more than willing to make

1 decisions about termination when they see a clear financial  
2 benefit to doing that.

3 When they see it's copyright infringement, apparently  
4 they don't see it in their best interest to terminate those  
5 subscribers. But they are more than willing to do that when  
6 there is evidence that it's not in their financial benefit,  
7 like, for example, when those customers are not paying their  
8 bills.

9 Q. I think you said out of 57,000 notices. Did you mean out  
10 of 57,000 direct infringing customers?  
11:26:40

11 A. Sorry. Out of 57,000 subscribers that are identified with  
12 the, you know, 270,000 or whatever it is notices that they  
13 received.

14 Q. Dr. Lehr, can you just briefly summarize.

15 A. Yeah. So what I have been explaining here is that  
16 evidence, I believe, shows very clearly that copyright  
17 infringement causes very significant harm to copyright holders.  
18 This is I think, you know, by any reasonable basis, the  
19 consensus opinion that comports with what you would expect  
11:27:17 20 theoretically and what is demonstrated in the empirical  
21 evidence.

22 And having said that, it's also the case that you  
23 can't precisely quantify what that financial harm is to the  
24 plaintiffs in a particular case.

25 The second point is that Cox's business, when you

1 understand it, is quite profitable and is throwing off a lot of  
2 money when they retain subscribers. And they have a strong  
3 economic incentive, I believe the evidence shows, to tolerate  
4 the infringement on their network, to retain infringers for  
5 which they have significant evidence are repeat infringers.  
6 And to, you know, continue that -- those business practices.

7 MR. GOULD: Thank you, Dr. Lehr. No further  
8 questions at this time.

9 I would move to admit PX 521, which I forgot to do  
11:28:10 10 earlier. That's the Mateus and Peha study that Dr. Lehr looked  
11 at.

12 THE COURT: All right. Any objection?

13 MR. BUCHANAN: No, Your Honor.

14 THE COURT: All right. It is received.

15 All right. Mr. Buchanan.

16 CROSS-EXAMINATION

17 BY MR. BUCHANAN:

18 Q. Good afternoon, Dr. Lehr.

19 A. Good afternoon.

11:28:58 20 Q. So you mentioned that by not taking more action as to  
21 infringement, Cox saved itself money with regard to customer  
22 calls and mailing more notices; is that right?

23 A. I think that's close to right. It avoided incurring costs  
24 that it would have incurred had it addressed the copyright  
25 infringement more aggressively than it did.

1 Q. Such as --

2 A. I mean, I wouldn't call that saving revenues, but --

3 Q. Okay. Avoiding costs?

4 A. The costs they would have incurred, had they adopted a  
5 more effective strategy, were contingent costs. And they  
6 avoided incurring those contingent costs.

7 Q. Okay. So you said, mailing more notices, that was an  
8 example. Do you know that they did not mail notices, they  
9 e-mailed them? Did you know that?

11:30:07 10 A. Yes.

11 Q. Okay. So what is the cost to e-mail a notice through the  
12 CATS system?

13 A. I don't know precisely. I know that, were one to think  
14 about that, one would want to consider the fully loaded costs.  
15 So what are the costs of the personnel and systems that are  
16 operating and all of that. Once you've got those costs  
17 incurred, the incremental costs of selling -- sending an  
18 individual e-mail might be relatively low.

19 But the repercussions of sending such a communication  
11:30:42 20 to a customer is likely to translate into additional customer  
21 service calls and all that sort of stuff. I did not have data  
22 to allow me to estimate precisely what those effects would be.

23 And so, I didn't because I wouldn't know exactly what  
24 the content or text of the e-mail would be.

25 So, for example, if you were to mail a customer



1 something that basically says, you know, we got a notice that  
2 you're infringing, you know, that's it, the customer may not do  
3 anything with it, may just ignore it.

4 If you mail one that says, you are violating the law,  
5 this is a serious problem, and the customer had to read it, and  
6 then the customer might call. So I don't -- you know, I don't  
7 have an opinion about that.

8 But had they done more, it likely would have affected  
9 the number of customer service calls they would have gotten.

11:31:27 10 Q. Okay.

11 A. The personnel they would have needed to do that, you know,  
12 and all that sort of stuff.

13 Q. So -- and just yes or no, Dr. Lehr. Did you attempt to  
14 quantify the cost of mailing more notices by e-mail to the CATS  
15 system if Cox had a more aggressive policy in dealing with  
16 infringement?

17 Yes or no, did you quantify it?

18 A. I can't answer that as a simple yes or no question because  
19 I would say --

11:31:53 20 THE COURT: Okay. Just say, I can't answer that yes  
21 or no.

22 THE WITNESS: I'm sorry. Okay. I can explain.

23 THE COURT: So if you can answer a question yes or  
24 no --

25 THE WITNESS: Okay.

1 THE COURT: -- or I can't answer it as asked, please  
2 do that. And then your counsel will follow up if he think it's  
3 appropriate. All right?

4 THE WITNESS: Okay. Thank you, Your Honor.

5 THE COURT: All right. Thank you. Go ahead.

6 A. I can't answer that yes or no.

7 BY MR. BUCHANAN: (Continuing)

8 Q. Did you attempt to quantify it?

9 A. I can't answer that as a yes or no question. I can  
11:32:24 10 explain to you what I did and how I thought about that problem.  
11 It's not a yes or no question.

12 Q. Okay. So you said that you understand it goes through an  
13 automated system, the e-mail that comes in, right?

14 A. Yes.

15 Q. The notice? Okay. And you know that -- you looked at the  
16 notice, right, that's prepared by the RIAA and sent to Cox?  
17 You reviewed that?

18 A. I looked at some of those, yes.

19 Q. And the CATS system doesn't need to do anything with that  
11:32:50 20 notice, it just needs to forward it after it reads it, right?

21 MR. GOULD: Objection, Your Honor, foundation, and  
22 outside the scope.

23 THE COURT: If he knows, he can answer. If you  
24 looked at that.

25 A. I don't know precisely how the CATS system operates

1 because as an economist, I wouldn't think that this was this  
2 thing that you just put out there as this box and it's all  
3 completely automated. There were interactions -- and when I  
4 talk -- when I say something, so there's no misunderstanding,  
5 when I say something like they would've dealt with the  
6 copyright infringement, you know, more aggressively, it  
7 wouldn't be just turn a dial on the CATS system. It might be  
8 modifying the CATS system, modifying the content of the notes,  
9 changing the staffing of those groups, all those sorts of  
10 things.

11 And so, I did consider those sorts of things and  
12 concluded that those costs would likely be material. But I did  
13 not try and come up with a dollar estimate of those because to  
14 do so would have required me to formulate an opinion about  
15 specifically what Cox should have done, and I didn't do that.

16 BY MR. BUCHANAN: (Continuing)

17 Q. Right. So you're not saying that Cox should have  
18 terminated after one notice, are you?

19 A. No.

20 Q. Okay. Now, before we get to that, I believe you testified  
21 that piracy was a global problem, right? Piracy involving file  
22 sharing and piracy with regard to copyright infringement was a  
23 global problem?

24 A. Well, I don't believe I testified to that. But I wouldn't  
25 disagree with that. I believe it is a global problem.

1 Q. And Cox, in terms of its market share or number of its  
2 subscribers, is very small in the United States compared to the  
3 rest of the total number of subscribers that use Internet  
4 service, right?

5 A. You mean globally?

6 Q. No. I said in the United States.

7 A. Oh, sorry. I wouldn't say very small.

8 Q. Okay.

9 A. I said they were the eighth, you know, largest. And  
11:34:45 10 4.5 million subscribers is not what I would consider a small  
11 number of subscribers.

12 Q. So could you look at your expert report in your binder?

13 A. I filed several reports. You mean the -- which --

14 Q. The first one.

15 A. Sorry. Okay. Yes.

16 Q. Okay. Paragraph 24, page 9, second to last sentence, do  
17 you have that? The carryover paragraph, carryover from  
18 paragraph 24, do you see where it says: Notably? Paragraph  
19 24. Okay. Page 9?

11:35:46 20 A. It says: Notably, Cox's revenues --

21 Q. Yes. Go ahead and read that.

22 A. Notably, Cox's revenues are generated entirely in the  
23 U.S., and Cox subscribers represent a fraction of all U.S.  
24 broadband subscribers.

25 Q. Okay. Thank you.

1 A. Which is true.

2 Q. Thank you.

3 A. But it's not small.

4 Q. Okay. So how does it compare to Verizon, or Comcast, Time  
5 Warner?

6 A. It's smaller.

7 Q. Okay. And you talked about that Cox should have used a  
8 more aggressive approach to dealing with copyright  
9 infringement.

11:36:23 10 Do you know what the approach that Verizon and  
11 Comcast, Time Warner, AT&T, and Cablevision were doing during  
12 the time period in question through the Copyright Alert System?

13 MR. GOULD: Objection, Your Honor, misstates  
14 Dr. Lehr's testimony. He never testified about what Cox should  
15 have done.

16 MR. BUCHANAN: I think he just did.

17 THE COURT: Yeah, rephrase the question.

18 BY MR. BUCHANAN: (Continuing)

19 Q. I said are you -- you said that they should have adopted a  
11:36:46 20 more aggressive approach. And what I'm asking you is, do you  
21 know what the approach was in dealing with copyright  
22 infringement that was being utilized by the Copyright Alert  
23 System members that had a contract with your clients and how  
24 they dealt with copyright infringement during the time period  
25 in question?

1 A. I have some general understanding about that.

2 Q. Okay.

3 A. But I'm not in detail. And I haven't considered, or in  
4 any level of detail, what specifically other providers were  
5 doing. I've considered the evidence about Cox.

6 Q. Okay.

7 A. So, you know, I don't have an opinion whether, for  
8 example, they were doing more than they should have or less  
9 than they should have, or what they did was right or whatever.  
10 I don't have a detailed understanding of that.

11:37:36

11 Q. Okay. But you're an expert in the area and you've cited  
12 like four -- six pages of articles you've read and you've  
13 testified about how much you know about the Internet, you're an  
14 expert.

15 So I want you to know -- I want to ask you, at the  
16 time period in question, 2013 and 2014, the claims period, did  
17 you not know or have you not learned since then as to what was  
18 happening in terms of copyright infringement notices and how  
19 they were being dealt with by the five largest Internet service  
20 providers vis-a-vis your client?

11:38:13

21 That was a major --

22 THE COURT: Well, you're -- you have a question  
23 pending. Thank you.

24 BY MR. BUCHANAN: (Continuing)

25 Q. Did you -- are you saying you have no idea about the

1 copyright --

2 THE COURT: Let him answer the question. I'm sorry.

3 A. I'm sorry. I thought my answer to you was, I do have an  
4 idea, it's a general idea. I don't know specifically what they  
5 were doing with respect to the Copyright Alert System or the  
6 history or how that evolved over time.

7 BY MR. BUCHANAN: (Continuing)

8 Q. So you talked about Cox's revenues based on terminating  
9 after one, three, and five notices, correct?

11:38:58 10 A. No.

11 Q. Okay.

12 MR. GOULD: Objection, Your Honor. It misstates the  
13 testimony.

14 THE COURT: He answered the question.

15 Ask your next question.

16 BY MR. BUCHANAN: (Continuing)

17 Q. So you're aware that those -- all the Internet service  
18 providers that are members of CAS, they did not terminate  
19 anyone? They had no obligation to terminate?

11:39:17 20 Are you aware of that.

21 A. I believe --

22 THE COURT: It assumes facts not in evidence.

23 MR. BUCHANAN: It's in the --

24 THE COURT: Objection sustained. Ask your next  
25 question.

1 MR. BUCHANAN: There are --

2 THE COURT: Come to the sidebar.

3 NOTE: A sidebar discussion is had between the Court  
4 and counsel out of the hearing of the jury as follows:

5 AT SIDEBAR

6 THE COURT: All right. I jumped before you -- what's  
7 your objection?

8 MR. GOULD: The whole line of questioning. I mean,  
9 we anticipated this. This is the third, fourth, fifth witness  
11:39:58 10 Mr. Buchanan has cross-examined where he has tried to use them  
11 as a backboard to reinforce the CAS names with a witness who  
12 has no foundation for the knowledge, didn't testify about it,  
13 didn't form his opinions based on it. And it's improper.

14 THE COURT: This doesn't -- did you -- is this part  
15 of the depositions or --

16 MR. BUCHANAN: Yeah, I asked him in the deposition.  
17 He said he understood it, he understood CAS. But he said he's  
18 their expert on the telecommunications industry and what's  
19 going on in the industry with all the different service  
11:40:29 20 providers, with infringement, piracy and everything.

21 And this was highly publicized. So there are  
22 articles there, and I am going to show him, in which I think  
23 Verizon, AT&T, and others make it clear with CAS, they do not  
24 terminate.

25 So the idea is, he says we should have done more, but



1 here I want to ask him about that. And then, of course, that's  
2 the draw from us to them by -- with all this advertisement.

3 In other words, I think it's relevant to his  
4 knowledge of the industry. It's very relevant how he has  
5 testified what's happening with others, what they're doing. He  
6 just talked about how he felt we should have done more, if we  
7 had done more we would have had additional costs, and we would  
8 have had to do this and that.

9 And I think it's relevant to say, okay, when you say  
11:41:13 10 we should have done more, and that we were not tolerate -- we  
11 were too tolerant, that's stuff that others didn't do.

12 MR. GOULD: Two points, Your Honor. Number one,  
13 Mr. Buchanan is misstating the evidence in the record. He  
14 stood up and asked the questions about, you're aware that  
15 Verizon and AT&T didn't terminate.

16 There's no -- that is not a substantiated fact. All  
17 the record shows so far is that within the confines of this  
18 private compromise agreement, certain parties agreed that  
19 termination would be not a required element of that. That's  
11:41:45 20 number one.

21 Number two, Dr. Lehr testified at a very high level  
22 that I am not opining on what Cox should have done. I'm simply  
23 saying from what I've seen here, I believe they should have  
24 done more.

25 THE COURT: Well, you know, the CAS agreement doesn't

1 speak of terminations, and I looked at it several times, one  
2 way or the other. It just was off the table. There has been  
3 testimony about the fact that it was something that the  
4 industry, the music industry wanted to have as part of the  
5 discussions over this two-year period. But the ISPs weren't  
6 willing to do that. So that's in the record.

7 And your exception is noted. I'm going to allow the  
8 testimony. But if he says, I don't know --

9 MR. BUCHANAN: Okay.

11:42:35 10 THE COURT: -- and I'm unaware one way or the other,  
11 then we'll move on.

12 MR. BUCHANAN: I can show him articles on the Web --

13 THE COURT: Well, if he says, I'm unaware of  
14 terminations, then what is the -- then you can't show him.

15 MR. BUCHANAN: He said he has read everything in the  
16 world. He has read 25 --

17 THE COURT: If you ask him -- I'm going to permit you  
18 to ask him a question about whether he is aware that no one  
19 else was terminating anybody in -- no other ISPs were  
11:42:59 20 terminating anybody. If he says I don't know, then we're done.

21 MR. BUCHANAN: So I can't show him a newspaper  
22 article where they announce --

23 THE COURT: No. He says, I don't know. And you can  
24 say to him, if you knew that no one else was terminating any of  
25 their subscribers, would it make a difference to your opinion,

1 absolutely.

2 MR. GOULD: One last point, Your Honor. There is  
3 evidence in the record that the ISPs in CAS had to still comply  
4 with their AUPs. And if they wanted to select the safe harbor,  
5 comply with that as well.

6 So it is misleading to testify -- for Mr. Buchanan to  
7 argue and ask questions about that. You're aware that nobody  
8 else terminated, that's improper. That misstates the evidence.

9 THE COURT: All right. Your exception is noted. Go  
10 ahead.  
11:43:43

11 MR. GOULD: Thank you.

12 NOTE: The sidebar discussion is concluded; whereupon  
13 the case continues before the jury as follows:

14 BEFORE THE JURY

15 THE COURT: All right. Go ahead, Mr. Buchanan.

16 BY MR. BUCHANAN: (Continuing)

17 Q. So, Dr. Lehr, are you aware that -- of whether pursuant to  
18 CAS there -- the member ISPs did not have to terminate notices  
19 that they received from the plaintiffs under that agreement?

11:44:44 20 MR. GOULD: Objection, Your Honor. The question is a  
21 bit unclear.

22 THE COURT: Overruled. You may answer, sir, if you  
23 can.

24 A. I don't believe -- first of all, I don't believe there was  
25 just one agreement with CAS. I think that CAS was a system

1 that evolved. And I don't know specifically what was involved  
2 in that agreement.

3 I believe I read some testimony either here or  
4 elsewhere that -- and I don't -- you know, that may have said  
5 that it didn't require -- I think that might have been in the  
6 opening statements. I read some of the opening statements from  
7 this trial that said that it did not require.

8 And so, you know, that may be the case. And whether  
9 that is or isn't wouldn't affect my opinion because it's about  
11:45:29 10 what other providers did to address the infringement. And I am  
11 not testifying about what other providers did or should have  
12 done.

13 I am not even testifying about what Cox should have  
14 done except to say they should have done more than what they  
15 did.

16 Q. Okay. So you just said they should have done more. If  
17 the other ISPs, the largest five in the county, had an  
18 arrangement with the plaintiffs that they were not required to  
19 terminate, would it be also okay for Cox to have an arrangement  
11:46:07 20 with the plaintiffs where they didn't have to terminate?

21 A. I don't know. I mean, that's a hypothetical that has too  
22 many things that I am not sure what matters.

23 I don't think that the question about Cox's agreement  
24 with plaintiffs about whether they had to terminate or not is  
25 the matter. The question is, what was Cox's incentive to

1 knowingly tolerate infringing subscribers on its network.

2 And my testimony is that they had a very strong  
3 economic incentive to tolerate that infringement and derived a  
4 direct financial benefit from knowingly retaining those  
5 subscribers on their network.

6 Q. So would you agree then that with the other ISPs that are  
7 part of CAS, if they have an agreement that no one has to  
8 infringe, right, so that would be an attraction for any Cox  
9 subscriber to leave its service and go over to one of the  
10 others since they have a much more tolerant policy toward  
11 infringement and termination?

12 MR. GOULD: Objection, Your Honor.

13 THE COURT: Sustained.

14 MR. GOULD: Incomprehensible.

15 THE COURT: Facts not in evidence.

16 BY MR. BUCHANAN: (Continuing)

17 Q. So did you read any articles at the time about CAS and  
18 when it came into play? Since you were reading -- you know,  
19 you testified that you follow -- you're an expert in the area  
20 and you follow what's happening in the market.

21 Did you read any articles when CAS came into play  
22 about how it would operate and how it would affect subscribers?

23 A. Well, over -- I have certainly read articles in the normal  
24 course of my work that address CAS. Precisely when it came  
25 into play and all of that, as I sit here right now I don't

1 precisely recall. Because people were doing about something  
2 like this for years. They were a lot of things.

3 The idea of how to deal with piracy, as I said in my  
4 original testimony, wasn't a new phenomenon. This has been an  
5 ongoing concern that predates.

6 What was relatively new was this sense in which, you  
7 know, broadband became such an important problem and so, you  
8 know, how to deal with that.

9 So, yes, I did read articles about.

11:48:39 10 Q. Okay. So I would like you to take a look in your binder  
11 at tab 6.

12 THE COURT: All right. Approach the bench, please.

13 NOTE: A sidebar discussion is had between the Court  
14 and counsel out of the hearing of the jury as follows:

15 AT SIDEBAR

16 THE COURT: So he said he hadn't read anything about  
17 terminations except in opening statements here. Which,  
18 obviously, is not the subject of his examination or would be a  
19 proper subject of his examination.

11:49:19 20 Now he says he knows generally that there was a CAS  
21 system discussed in several agreements.

22 Where are you going with this?

23 MR. BUCHANAN: So he just said he had read some  
24 articles at the time. I'm going to ask him if he read these  
25 articles.

1 THE COURT: And what's the point behind asking him  
2 whether he read those articles?

3 MR. BUCHANAN: Because the articles are a statement  
4 in response to the concern in the market by subscribers that  
5 none of them are terminating, and telling everyone they are not  
6 terminating.

7 So I can refresh his recollection. He says he has  
8 read a lot about it.

9 THE COURT: He says he hasn't read about the  
10 terminations. He doesn't know one way the other, and it  
11 doesn't matter to his opinion. So there may be a witness that  
12 you get this in through, but it is not going to be Dr. Lehr.  
13 Your exception is noted. We are not going through this.

14 MR. BUCHANAN: Okay.

15 NOTE: The sidebar discussion is concluded; whereupon  
16 the case continues before the jury as follows:

17 BEFORE THE JURY

18 BY MR. BUCHANAN: (Continuing)

19 Q. So you list here the revenue and net profits and margins  
11:51:59 20 of Cox vis-à-vis four of the plaintiffs in this space, right?

21 A. Yes.

22 Q. Okay. And I know you put up a slide that showed the  
23 dividend that went to the -- the sort of parent company of some  
24 dividend of like 1.4 billion. Do you recall that slide?

25 A. I wouldn't describe it as the parent company. I would

1 describe it as like the owners of the company, sort of the  
2 investors. Which, you know --

3 Q. So on this slide you have Sony Music and Sony/ATV. Sony,  
4 the parent company, is worth \$60 billion, is it not?

5 A. As I sit here right now, I'm not sure. But what I was  
6 focusing on was the recording and record business. Sony also  
7 deals in a number of other product markets. They sell  
8 appliances and other things like that. They are a consumer  
9 goods supplier.

11:53:04 10 And I'm just focusing on here the portion of the Sony  
11 business that's in the relevant business of managing art  
12 copyright.

13 Q. So do you know whether the parent company Sony Corporation  
14 is worth \$60 billion?

15 A. Do I know that precise number as I sit here right now?  
16 No. I just said that.

17 Q. Okay. So do you know who owns the Warner Music Group?

18 A. I don't -- I mean, it's a publicly traded company, but I  
19 don't know specifically who owns it.

11:53:47 20 Q. So have you heard the name Vivendi? Do you know if that's  
21 the owner?

22 A. As I sit here right now, I don't recall. Yes, I have  
23 heard the name Vivendi.

24 Q. You have heard that name. Do you know they are worth  
25 \$14 billion?



1 MR. GOULD: Objection, Your Honor. No foundation and  
2 it's inaccurate.

3 THE COURT: Overruled. He said he doesn't know.

4 BY MR. BUCHANAN: (Continuing)

5 Q. Do you know what Vivendi is worth?

6 A. No.

7 Q. Okay. Do you know that Vivendi actually -- Access  
8 Industries, have you heard of them? They own the Warner Music  
9 Group, are you aware of that? They are a private equity  
10 company.

11:54:29

11 A. No. But, again, we're talking --

12 Q. It's a yes or no, a yes or no answer.

13 A. I don't know who precisely the owners are. Just like I  
14 don't know precisely whose Cox's family is that receives the  
15 dividends. I just know in general terms that the investors are  
16 different.

17 THE COURT: Wait for the next question. Thank you,  
18 sir.

19 THE WITNESS: Sorry.

11:54:48

20 BY MR. BUCHANAN: (Continuing)

21 Q. Do you know that they are worth \$10 billion?

22 A. Sorry, the private equity firm?

23 Q. Yes. Do you know what they're worth is?

24 A. I don't know. And I don't know who they are.

25 Q. And the fact that whether it's the music companies or the

1 parent companies of these, that we just mentioned, Sony,  
2 Vivendi, there is no suggestion by you that because they are  
3 incredibly wealthy and successful and profitable, that they  
4 would do anything to harm, say the artists that they represent,  
5 are you?

6 A. No, absolutely not.

7 Q. Okay. Could you put up slide 14.

8 So, Dr. Lehr, you see slide 14? It's titled Cox  
9 Value of Infringing Subscribers, February 2013 to 2016.

11:56:15 10 Do you see that?

11 A. Yes.

12 Q. Okay. So what is the claims period in this case?

13 A. February 2013 through I believe the end of November 2014.

14 Q. Okay. So your analysis adds two additional years, 2015  
15 and 2016, to the claims period, right?

16 A. I'm showing data through 2016. But to say it adds it I  
17 think is a mischaracterization of what I'm presenting here and  
18 what I meant to present when I explained it.

19 Q. Okay. So what were the numbers -- if you could just  
11:56:53 20 examine the claim period, what would the numbers on this chart  
21 reflect if you just did 2013 and 2014?

22 A. The numbers would be lower.

23 Q. How much? 50 percent?

24 A. As I sit here right now, I don't remember precisely how  
25 much lower. They would still be, you know, a large number.

1 Q. Okay. Okay. It would be large. So would it be  
2 50 percent lower? 60 percent? You did the calculation, right?

3 A. Yeah. But as I sit here right now, I'm not going to offer  
4 expert testimony about a number that I don't know precisely  
5 what it would be.

6 And, you know, as I said, or implied, I could have  
7 shown earlier data also. I chose not to. And had I had later  
8 data, I would have included that. I would have for this. I  
9 didn't have it.

11:57:39 10 Q. So I understand that. And you would have done a lot of  
11 things.

12 What I am asking you, did you do the analysis, and I  
13 believe you said yes, with regard to the claims period, but you  
14 just don't remember what that -- those results were; is that  
15 right?

16 A. I believe I calculated what it would be if I looked at  
17 that lower period. And I did not -- I concluded that that  
18 wasn't appropriate in terms of representing --

19 THE COURT: Okay. The question was --

20 THE WITNESS: Yes.

21 THE COURT: -- did you do the 2013/'14 data  
22 separately? And you didn't include it this demonstrative, but  
23 you did it at an earlier time; is that correct?

24 THE WITNESS: Yes, before I sat in this seat I had  
25 done that calculation.

1 THE COURT: Okay.

2 THE WITNESS: And as I sit here --

3 THE COURT: Thank you. Wait for your next question.

4 BY MR. BUCHANAN: (Continuing)

5 Q. So you have numbers here of 307 million, 208 million, and  
6 164 million. And so, you're saying that you cannot even  
7 estimate what they would be based on an analysis just including  
8 the claim period; is that right?

9 A. I can't give you, as I sit here right now, a dollar  
11:58:50 10 estimate for that updated thing. It would be an easy enough  
11 thing to compute from the data that's in evidence here. And it  
12 would be in the tens of millions of dollars, but I can't offer  
13 you a specific number as I sit here now.

14 Q. Okay. So these three numbers, 307 million, 208 million,  
15 164 million, they're actually -- they reflect the bills that  
16 went to these particular subscribers, right?

17 A. Yes.

18 Q. Okay. So I think you said the profit margin was  
19 40 percent; is that right?

11:59:27 20 A. Well, in 2014 it was, I believe, 43 percent, yes.

21 Q. Okay. You remembered that. What about 2013 and 2015 and  
22 '16, do you remember what the profit margins were then?

23 A. As I sit here right now, I don't recall.

24 Q. Okay. So if we wanted to get to the profit margin though,  
25 we would basically take 60 percent away from these numbers,

1 right?

2 A. Well, as I sit here, as a sort of ballpark calculation, I  
3 don't think that's an unreasonable thing to do.

4 Q. Pardon me?

5 A. As I sit here now, I would want to do it precisely. But,  
6 you know, I think that approximately, as I sit here right now,  
7 you know, estimating that the net profit that would correspond  
8 to these billing charges would be 99 percent of these numbers,  
9 and then, you know, 40 percent of what you got from that.

12:00:33 10 So the calculation you suggested was not  
11 unreasonable.

12 Q. All right. So now I want to get to the 57,279 subscriber  
13 count. So these subscribers, that's basically all the  
14 subscribers that are in the case, right?

15 A. No. It's the subscribers that I was able to match up  
16 between the billing and this. So they're slightly different  
17 numbers. But the 57,279 are the subscribers for which I had  
18 both billing data and ticket data, and I was able to do that  
19 matching.

12:01:18 20 And that's close to the number of subscribers that  
21 have been identified as, you know, infringing and associated  
22 with the RIAA notices.

23 Q. So for these 57,279, and I'll just say -- let's assume one  
24 of them is a hospital. At what point in time in this 2013 to  
25 2016 period, four years, did that -- you know, did the

1 average -- we'll, just pick the average. Did the average  
2 subscriber that got one DMCA ticket in this 57,279, the  
3 average, when did they get their first ticket or their only  
4 ticket during this period of 2013 to 2016?

5 A. The average one?

6 Q. Well, pick any one.

7 A. Well, first off, the ticket -- all the subscribers that  
8 are in this dataset, I only know about the tickets they got  
9 between 2012 and 2014.

12:02:15 10 It's reasonable to suspect, since Cox was tolerating,  
11 had a strong economic incentive to tolerate infringement, that  
12 there were additional subscribers and additional tickets that  
13 would have happened in 2014 to 2016. But I don't know what  
14 those were because I never saw that data. It wasn't provided.

15 MR. BUCHANAN: Your Honor, I would object, totally  
16 non-responsive.

17 THE COURT: No. You asked a question which was  
18 beyond the yes or no. I won't strike it.

19 But listen carefully to the questions and answer yes  
12:02:47 20 or no if you can. And if you can't answer the question, say  
21 you can't answer the question.

22 THE WITNESS: So, Your Honor --

23 THE COURT: No, no.

24 THE WITNESS: Oh, okay.

25 THE COURT: Okay? All right.

1 THE WITNESS: I apologize.

2 BY MR. BUCHANAN: (Continuing)

3 Q. So did you look at -- with regard to these 57,279  
4 subscribers, did you look at any of them to determine when they  
5 got the one DMCA ticket during this period of 2012 to 2014?

6 A. Yes.

7 Q. Okay. So when did they get their ticket? The ones that  
8 got one, when did the typical subscriber within that mix get  
9 their first ticket during that period? Was it 2012, 2013, or  
10 2014?

12:03:30

11 A. In the data sample, there are observations of subscribers  
12 that have their first reported ticket in all of those years.  
13 So there are some that got it in 2012.

14 Q. Okay.

15 A. There are some that got it in 2013. And there are some  
16 that got it in 2014.

17 Q. Okay. How many of the 57,000 got it in 2014, after the  
18 claims period, or during --

19 A. I'm, sorry. You mean between -- in December 2014?

12:04:06

20 Q. No. How many got it in 2014? We'll just go for the whole  
21 year.

22 A. As I sit here right now, I don't remember precisely what  
23 that was.

24 Q. Okay.

25 A. It was something that, you know, you could compute that in

1 the dataset.

2 Q. Okay. But you didn't compute it, is what you're saying?

3 A. I may have looked at that and computed it. As I sit here  
4 right now, I don't remember specifically having done that  
5 calculation.

6 Q. Let's just pick a number and assume that in 2014 10,000  
7 got their one ticket, and they were terminated at that point,  
8 getting the one ticket. You would not be able to capture the  
9 revenue from that based on that termination date for the two  
10 prior years, would you?

12:04:51

11 In other words, if when you terminate -- I'll ask it  
12 this way. If you terminate somebody for having one ticket,  
13 they stop paying when you terminate them, right?

14 MR. GOULD: Objection, Your Honor. Mr. Lehr has  
15 already testified --

16 THE COURT: It's a hypothetical. I'm sorry?

17 MR. GOULD: Dr. Lehr has already testified that it is  
18 not his opinion that Cox should have terminated after one  
19 ticket.

12:05:18

20 THE COURT: Okay. But he's asking a hypothetical.  
21 Thank you.

22 A. Well, I mean, so I'm trying to understand what the  
23 hypothetical would mean.

24 So the first thing, it's a hypothetical that  
25 presumes, if I hear you correct, that Cox is in a world where



1 they are terminating subscribers.

2 The data shows that of this 57,000 subscribers, they  
3 only ever terminated 13. Okay.

4 So this is a hypothetical that's radically different  
5 from the world in which they actually exist. And my testimony  
6 was definitely not that they should have terminated.

7 But the question you asked, the final part, I thought  
8 you said, if they terminated, let's say, a ticket, then they  
9 wouldn't -- I wouldn't count the revenue after the termination.

12:05:59 10 And that's true because had they terminated the subscriber,  
11 that revenue wouldn't have been in the ICOMS database for the  
12 period after that because they wouldn't have been collecting  
13 revenue from that subscriber.

14 BY MR. BUCHANAN: (Continuing)

15 Q. So in your -- when you -- you have 57,279 subscribers that  
16 you say have one ticket, and that they were billed  
17 \$307 million. And you're saying that Cox, had they had an  
18 appropriate infringement policy, that they would never have  
19 gotten any of that money; isn't that right?

12:06:38 20 A. No.

21 Q. Okay. What about with three? Isn't it true that what's  
22 represented here, is you've calculated how much money that  
23 was -- how many bills, the amount of the bills that were sent  
24 to these subscribers that got three or more tickets during the  
25 period 2013 to 2016?

1           You're calculating how much they were billed, right?  
 2       A.    This calculation is a mechanical calculation from the  
 3       dataset. And what it shows is, having those 31,514 subscribers  
 4       on Cox's network for which it had evidence of them being  
 5       infringers, it billed those subscribers \$208 million.

6           Which I take as evidence, as an economist, that they  
 7       knew they had repeat infringers on their network that they were  
 8       deriving significant financial benefit from.

9       Q.    So is it your testimony then that a subscriber, whether it  
 10       be a hospital, or an older lady in a nursing home, got one  
 11       ticket, that that person is a repeat infringer?

12       A.    That's not my testimony. I wouldn't know. They very well  
 13       might be a repeat infringer or not. Because I've testified  
 14       that the data about the tickets is -- doesn't tell you exactly  
 15       whether they're a repeat infringer or not.

16           Certainly if the little old lady got, let's say,  
 17       hypothetically, 100 tickets, I would say -- I'd be more  
 18       inclined to believe that there was evidence that that little  
 19       old lady was a repeat infringer if such an example existed in  
 20       the data.

21       Q.    So you looked at the ticket data which captured all the  
 22       notices from the plaintiffs and any third parties to the  
 23       subscribers in question in this case for the period 2012 to  
 24       2014, right?

25       A.    Well, I looked at that subsample of the data that was

1 provided, you know, from the CATS system.

2 Q. So isn't it true, Dr. Lehr, that you're basically saying  
3 that as to these 57,279 subscribers that paid \$307 million,  
4 that Cox should have been omniscient and should have  
5 anticipated that they would get one ticket and we should have  
6 terminated them before they came, because otherwise, we --  
7 that's why we would have never got the \$307 million?

8 They had -- they could have never been on the network  
9 for us to not get the \$307 million, right?

12:09:28 10 A. No, I think that's a significant mischaracterization of my  
11 testimony.

12 What I'm saying is, these are the subscribers that  
13 were -- there was evidence they were infringing and Cox had  
14 evidence that would allow them to know that. And they had  
15 other evidence, which I also explained. Like the volume of  
16 peer-to-peer traffic on their network, you know, that they knew  
17 they had a lot of infringing subscribers.

18 This is concrete evidence of specific subscribers  
19 that were demonstrated -- you know, that demonstrated that they  
12:10:04 20 were engaging in infringing activity.

21 Q. Okay. So -- but your testimony is not that Cox should  
22 have terminated after one, after three or five notices, right?

23 A. That's right. I'm not testifying that Cox should have  
24 terminated any specific number of users.

25 Q. Okay. So the \$307 million that you have here, that goes

1 from -- that's for 2013, '14, '15 and '16, four years of  
2 billings; is that right?

3 A. Yes.

4 Q. Okay. And I think you've testified that in terms of when  
5 they got the one ticket vis-à-vis the billings over the  
6 four-year period for that individual subscriber, that's  
7 irrelevant to your calculation; is that right?

8 A. It's not irrelevant. I explained how I did the  
9 calculation, and I know when they got the ticket. I don't  
10 think -- it's not in this particular calculation.

11 Q. So let's go back. So you know when they got the ticket.  
12 So let's go to 2014. Someone gets a ticket, one ticket. All  
13 right? They're terminated, right?

14 A. Right.

15 Q. Okay. So all Cox loses is the revenue that comes -- would  
16 come after that, correct?

17 A. Well, in that hypothetical, that is correct.

18 Q. Okay. And that's the same with three and five, the  
19 revenue would stop when they hit three and five and they were  
20 terminated, right?

21 A. Well, again, in that hypothetical, that assumes that Cox  
22 actually was terminating subscribers that the demonstrative  
23 evidence demonstrates they weren't in fact doing.

24 Q. Did I ask you that --

25 A. I'm trying --

1 Q. Dr. Lehr, you're not --

2 A. Go ahead.

3 Q. Dr. Lehr, the question, it's simple -- I know you  
4 constantly want to put this other information back in. After  
5 three or five notices, if the person was terminated, then the  
6 revenue associated with that particular subscriber would end on  
7 the date of termination, right?

8 A. Yes. I believe I already answered that.

9 Q. Okay. All right. But what you've done is basically said,  
10 it's the same as if these people, these subscribers -- we'll  
11 start with the 57,000 -- had never been subscribers?

12 A. I'm sorry. I don't understand. Is that a question?

13 Q. So -- yes, 300 --

14 A. Are you --

15 Q. Okay. Listen. \$307 million, okay, were billed to people  
16 that had one or more notices, one or more DMCA tickets, right,  
17 57,279?

18 A. Yes.

19 Q. Okay. So if you're attributing this \$307 million as  
20 something that they -- obviously you're saying that they paid,  
21 okay, after they got their bills, the only way Cox would not  
22 get any of that money is if they were never subscribers, right?

23 MR. GOULD: Your Honor, objection. It's a  
24 mischaracterization of the opinion on economic incentive.

25 THE COURT: Well, overruled. If you can track this

1 question and answer it, go ahead.

2 A. This may be a little bit complicated, but the records that  
3 are in here, if those people had never been subscribers, then  
4 their revenues never would have been in the ICOMS dataset.

5 But probably --

6 THE COURT: All right. So that's the answer to  
7 your --

8 THE WITNESS: No. Sorry, I don't believe it is.

9 THE COURT: Okay.

12:13:43 10 THE WITNESS: Because he said that those  
11 subscribers -- it's a mischaracterization of the data. The  
12 number might not change. You pull out any individual  
13 subscribers, you'd be in a different hypothetical world where  
14 you would have observed different subscribers, with a different  
15 dataset.

16 Now, all of the data suggests that infringing  
17 activity and piracy is very popular. We have specific data  
18 that was provided here. I'm not making an opinion here about  
19 how many of these they should have terminated, which seems to  
12:14:11 20 be the mischaracterization.

21 Had these people not been on their network, other  
22 infringers probably would have been. And I don't believe that  
23 someone that has one ticket --

24 THE COURT: Okay. You weren't asked that question.  
25 All right, stop there.

1 Go ahead, Mr. Buchanan.

2 THE WITNESS: Okay.

3 MR. BUCHANAN: I move to strike that, Your Honor.

4 THE COURT: Yeah, I will strike the last answer. It  
5 may be that it's asked in redirect, but it's not responsive,  
6 sir.

7 THE WITNESS: I apologize.

8 BY MR. BUCHANAN: (Continuing)

9 Q. So, again, whether you look at the 57,000 that got one,  
10 31,000 that got three, the 20,000 that got five, okay, the only  
11 way that we would not have had any of this revenue associated  
12 with them is if they had never come onto the network, right?

13 THE COURT: Revenue from those specific subscribers?

14 Q. Yes.

15 A. For that period of time. So I only have data for 2016.  
16 If those subscribers had come onto the network afterwards or  
17 before it left, then there would still be revenue, but I  
18 wouldn't have it.

19 So I think, you know, subject to those provisos,  
12:15:15 20 which is to interpret what the data is I am presented with.

21 Q. And you've talked a lot about incentives to keep them.  
22 So, obviously, would you agree that if Cox has a policy, let's  
23 say it's one, terminate after one, hypothetical, or three, or  
24 five, either one of those, and other ISPs do not terminate,  
25 there is certainly an incentive for the people that want to

1 download music to go to those networks and sign up there,  
2 right?

3 That would be an economic incentive for someone to  
4 move from Cox, assuming they terminated after one, three, and  
5 five, to go somewhere where they did not terminate for  
6 downloading music? Wouldn't that be true?

7 A. What I'm hearing in your question is that if Cox  
8 terminated subscribers for infringing activity, that is how  
9 they chose to address it, but the subscribers could move to  
10 another account, that would be an incentive for them to move.

11 And so, that's the reason why Cox didn't want to  
12 terminate or had incentive to retain them, because they made  
13 money from those subscribers.

14 Q. So did you happen to look at any data that was provided by  
15 the CAS members in which they collected notices, and how they  
16 were dealing with notices, and that was provided to the  
17 plaintiffs in the course of the CAS -- on the CAS -- pursuant  
18 to the CAS system, the CAS agreement?

19 A. I don't believe I did. Whether -- if I saw such  
20 information, it would have been noted in my reports. But as I  
21 sit here right now, I don't recall having looked at that.

22 Q. So you don't recall seeing any data that tracked  
23 subscribers and how many subscribers got how many notices among  
24 the CAS members, Verizon, Comcast, AT&T, Time Warner,  
25 Cablevision?



1 A. I don't recall having seen that.

2 Q. Would that data have allowed you to determine whether  
3 people --

4 MR. GOULD: Objection, Your Honor.

5 THE COURT: Let's move on.

6 BY MR. BUCHANAN: (Continuing)

7 Q. So on the same slide, as I understand it, and if I can  
8 find my notes here, was it -- what percentage -- it was  
9 20-something percent of the Cox subscribers that you were  
10 analyzing here that had just Internet service; is that right?

11 A. That sounds -- I don't know. It was in my report, but I  
12 don't know as I sit here right now whether it was 20 percent.  
13 But that sounds close.

14 THE COURT: It's on another slide, right? Do you  
15 want to show him the other slide that has the high-speed  
16 service, the voice, the video, the --

17 MR. BUCHANAN: I can do that, Your Honor.

18 THE COURT: I mean --

19 MR. BUCHANAN: If I can find it here. I don't think  
20 it broke it down. But let me just -- sorry.

21 BY MR. BUCHANAN: (Continuing)

22 Q. So you would agree, Dr. Lehr, that -- okay. 11. It  
23 doesn't show percentages, but you have already said it was  
24 20 percent for just the Internet.

25 So we have video, voice, and high-speed Internet. So

1 20 percent of these subscribers in question just had Internet  
2 service, right?

3 A. No. Sorry. When I agreed to 20 percent, that was of  
4 subscribers that subscribed to Internet service. Only  
5 23.4 percent only subscribed to Internet service. So of the  
6 total number of subscribers, the share that subscribed to only  
7 Internet service would be a smaller number.

8 Q. A smaller number?

9 A. Yeah, less than 23.4 percent.

12:20:08 10 Q. What would it be? Do you know?

11 A. I don't know. Presumably you could calculate that.

12 Q. 10 percent?

13 A. No, it would be much higher than that, but I don't  
14 remember exactly, precisely.

15 Q. So if you -- let me talk about video. So, obviously,  
16 using your television, watching HBO, NFL package, you're not,  
17 you're not using -- you are not affecting copyright  
18 infringement, right?

19 If you're using television or your phone, you can't  
12:20:38 20 engage in peer-to-peer file sharing, can you?

21 MR. GOULD: Objection, foundation.

22 THE COURT: If you can answer the question, answer  
23 the question.

24 A. I'm not sure what the question is.

25 BY MR. BUCHANAN: (Continuing)

1 Q. Someone doesn't use their telephone or their fax machine,  
2 their landline or their fax machine, to download music from the  
3 Internet, do they?

4 A. No, they don't.

5 Q. Okay. And you don't use your TV to do it, do you?

6 A. Not generally.

7 Q. So -- but when you calculated the 307 million, the  
8 208 million, and the 164 million, you didn't exclude revenue  
9 for video and voice, did you?

12:21:29 10 A. No, of course not.

11 Q. Okay. Let's go to slide 17.

12 So you've found this individual that had 101 total  
13 tickets. What's the time period that he had this -- the  
14 tickets?

15 A. Between 2012 and 2014, because that's the subsample of the  
16 data that we were provided.

17 Q. Okay. And so, this person is an outlier, wouldn't you  
18 agree?

19 Do you know any other individual subscriber,  
12:22:25 20 residential subscriber that had 100 tickets?

21 A. I saw some other ones. As I sit here right now, I  
22 certainly wouldn't remember their customer ID number, and I  
23 don't know them specifically.

24 Q. You're saying under oath that you know that there is  
25 another residential subscriber that had over 100 tickets?

1 A. It was my understanding there was, yes.

2 Q. Would you know that there were 49 subscribers that had  
3 over 100 tickets, and 48 were commercial enterprises? Do you  
4 not know that?

5 A. I would have to go back to the dataset. As I recall, this  
6 was not the greatest number of tickets that a residential  
7 subscriber got. As I sit here right now, I might be wrong  
8 about that, but I don't think so.

9 Q. Okay. So let's go to PX 18 -- I'm sorry, it's PX -- it's  
12:23:25 10 slide 18. Sorry.

11 So this is an Internet service provider, correct?

12 A. Yes.

13 Q. Had 4,000 tickets, 4,074 tickets over, what, a four-year  
14 period; is that right, or longer?

15 A. Well, again, it's 2012 to 2014.

16 Q. Okay. Three years.

17 Do you know how many subscribers this Internet  
18 service provider had?

19 A. No, I don't.

12:23:57 20 Q. Do you know if it was over 100,000?

21 A. I don't know as I sit here now.

22 Q. Does it matter to you?

23 A. For the purpose of the opinion and for which I presented  
24 this, I don't think it would make any difference.

25 Q. So you basically -- you've taken the worst, the worst

1 subscribers in terms of -- or the subscribers with the most  
2 tickets, haven't you, in these three examples that you could  
3 find?

4 A. Well, within the data sample, the average number of  
5 tickets amongst the 60,000 is certainly less than 101 tickets,  
6 and certainly less than 4,000 tickets. But to say that these  
7 are the worst, it's just that the distribution -- we have  
8 evidence that is spread out.

9 Q. With respect to --

12:24:50 10 A. And what I'm highlighting is that, you know, these are --  
11 there are examples in there of subscribers that, you know, were  
12 I think by all -- were repeat infringers. And Cox realized  
13 substantial benefits even after having acquired significant  
14 evidence --

15 Q. Did I ask you did they receive substantial benefits,  
16 Dr. Lehr?

17 MR. GOULD: Objection.

18 THE COURT: Ask the next question, please.

19 BY MR. BUCHANAN: (Continuing)

12:25:21 20 Q. So let's go back when you said repeat infringers. So we  
21 have got -- you referred to the person with ISP with  
22 potentially tens of thousands or more subscribers itself that  
23 got 4,000 tickets in three years is a repeat infringer.

24 Are the people that got three tickets, are they  
25 repeat infringers as well? The 31,000 that got three or more,

1 are they repeat infringers?

2 A. I believe that the evidence, as I've presented it here,  
3 speaks for itself. And I believe the evidence suggests that  
4 indeed they are. I believe the evidence suggests even that  
5 someone that got one DMCA ticket may very well be a repeat  
6 infringer.

7 I am not opining about what the definition of repeat  
8 infringer is or what the actual number of infringements would  
9 be. I have already said that I believe that the whole DMCA  
10 database is an understatement of the actual amount of  
11 infringing activity.

12 And so, I'm working with the data I have and I'm  
13 trying to present it as transparently as I can.

14 Q. So here, according to the ticket data, which captures this  
15 period of time, notices from the plaintiffs, okay -- you  
16 understand that the plaintiffs in this case sent notices,  
17 right?

18 A. Yes.

19 Q. Okay. And you understand that they never exceeded the cap  
20 that they had of 600 on any one day in terms of the notices  
21 that were sent? Do you understand that?

22 A. Well, I understand the cap changed and that there is some  
23 variation about the number of notices. And I don't know in  
24 detail whether or not the -- what the process was for  
25 processing the notices. I am generally familiar with that, but

1 I'm not going to testify about that.

2 Q. Well, you just testified about how you thought there was a  
3 lot more infringement activity out there, and that you knew  
4 that. But -- so what I'm asking you now is, do you know for a  
5 fact, okay, are you aware that the plaintiffs in this case and  
6 the notices they sent never came close to their cap of 600 a  
7 day?

8 MR. GOULD: Objection, misstates the evidence.

9 THE COURT: Sustained.

12:27:40 10 BY MR. BUCHANAN: (Continuing)

11 Q. Do you know whether they ever came close to the 600 notice  
12 cap in a single day?

13 A. As a fact? No, I don't know that. I don't have an  
14 opinion about that.

15 Q. Okay. So back -- if you look at this -- what we're  
16 looking at, this chart here, 14, you can look -- so we have the  
17 ticket data that captures not only all the notices from the  
18 plaintiffs, but any notices to these same subscribers during  
19 the time period from a third party content owner, you are aware  
12:28:15 20 of that?

21 That's what's in the ticket data, are you aware of  
22 that?

23 A. I believe that's true.

24 Q. Okay. So based on this, I mean, if you look at this,  
25 those that had four or less, according to your tabulation, is

1 like 38,000 subscribers who received at least one ticket, and  
2 you had four or less based on this, correct?

3 A. Sorry, where do you see four or less on this?

4 Q. I see where you say five or more is 20,000. So I'm  
5 subtracting 57,000 from 27,000.

6 A. Okay.

7 Q. That's 37,000 that had, according to this data right here,  
8 one, two, three or four, right?

9 A. Okay.

12:29:00 10 Q. That's right?

11 A. Yes.

12 Q. And you're not saying those 37,000 should have been  
13 terminated, are you?

14 A. No, I'm not saying any specific number of subscribers  
15 should have been terminated.

16 Q. All right. Let's go to the next, 17. I'm sorry, 19.

17 So this is a college fraternity that had 67 tickets  
18 over, what, a three-year period; is that right?

19 A. Yes.

12:29:48 20 Q. Okay. Do you know what college fraternity this was?

21 A. As I sit here right now, I don't recall.

22 Q. Do you know if they were in a dormitory or in a house?

23 A. As I sit here right now, I don't recall.

24 Q. Do you know if their system was tied to the university?

25 A. As I sit here right now, I don't recall.



1 MR. GOULD: Objection, Your Honor, he just testified  
2 he doesn't know.

3 THE COURT: All right. He doesn't know.

4 BY MR. BUCHANAN: (Continuing)

5 Q. Can we turn to 23.

6 Okay. So the first question I have is, I see that  
7 you've got \$43.19 and then you've got 49.71, right? You  
8 created this chart?

9 A. Yes.

12:31:26 10 Q. Okay. So why did you make it look like one was three  
11 times higher than the other one and there's only an 8.4 percent  
12 difference?

13 A. Well, this was created on my behalf, but the numbers --

14 Q. Don't you think that's misleading?

15 A. No. I think the numbers are really clear and they're in  
16 big font. I mean, I -- you know --

17 Q. Okay. What about the bar graph? One is three times  
18 higher than the other, it looks like it's 300 percent greater.  
19 Did you do that?

12:31:58 20 A. Well, I didn't actually generate -- I told them the slides  
21 I wanted.

22 Q. Okay.

23 A. But I'm not actually adept enough at PowerPoint to do this.

24 Q. So here you've taken 20-plus tickets, okay? Those are  
25 outliers, would you not agree, based on what we just went over

1 with the other document? How many subscribers got one, two,  
2 three or four?

3 A. No, I wouldn't regard those as outliers.

4 Q. Okay.

5 A. They were in the sample. Usually when someone refers to  
6 an -- I mean, I can explain what an outlier means to me.

7 Q. Okay. That's all right. If you say it's not an outlier  
8 to you, that's fine.

9 But you didn't do this -- what were the people that  
10 got three or four tickets, did you realize what they were  
11 paying, or five or six or seven or eight?

12 A. I don't think so. I don't recall specifically.

13 Q. Okay. So when you -- and you're talking about here, you  
14 believe that people that got more tickets needed more data, so  
15 they paid a higher price; is that sort of your thought?

16 A. Well, as I explained when I was providing my testimony,  
17 there's a lot of evidence to suggest that in fact that would be  
18 true. And so, then this was a way to demonstrate that using  
19 the actual empirical billing data and tickets data that Cox  
12:33:54 20 had.

21 But, you know, if I didn't have this data, I had  
22 other evidence to suggest that was true, and I presented that  
23 also.

24 Q. So what you're suggesting though is people that had 20 or  
25 more tickets, they necessarily purchased more data, paid a

1 higher price, a higher tier? Is that what you're saying?

2 A. Within the data sample I had, that's what the data, the  
3 observation of the data says.

4 Q. Okay.

5 A. Is they -- that they purchased more. It was --  
6 statistically the average of what they purchased was  
7 statistically 8.4 percent higher. That's what the --

8 Q. Okay. But you do not know why any of the people that had  
9 20-plus tickets actually purchased the higher tiered service,  
10 do you? You can't say why.

11 It could have been for any number of reasons, that  
12 they wanted more data, right?

13 A. Well, I can't speak in detail to the decisions -- the  
14 purchase decisions of any specific subscriber.

15 Q. Okay.

16 A. I can say that if they wanted to --

17 THE COURT: Okay. All right. You answered the  
18 question. Next question.

19 BY MR. BUCHANAN: (Continuing)

12:35:05 20 Q. And so, are you -- so the tickets here, so you're talking  
21 about -- you're talking about 20-plus tickets, right?

22 A. Yes.

23 Q. Okay. So how many notices are involved with these  
24 particular subscribers that got 20-plus tickets, do you know?

25 A. I don't know precisely as I sit here right now.

1 Q. And over what period of time did these subscribers get  
2 20-plus tickets?

3 A. Well, it would have been over -- between 2012 and 2014  
4 because that's the data I had.

5 Q. 2012, '13, '14; is that right? Three years?

6 A. Yes.

7 Q. Okay. And there could be one notice for every ticket,  
8 right?

9 A. When you say one notice, you mean identification of one  
10 song that generated the ticket? I'm not sure --

11 Q. No, a notice. A notice comes in from the plaintiffs, that  
12 generates a ticket, right?

13 A. Oh, okay.

14 Q. Okay. Is there -- is it a -- do you know that if a notice  
15 generates a ticket or not? Do you know how a ticket is  
16 generated?

17 A. Generally, I do.

18 Q. Okay. What is it, do you know?

19 A. Well, that generally MarkMonitor would track and identify  
12:36:24 20 the evidence that there were IP addresses that were associated  
21 with distributing copyrighted material that belonged to the  
22 plaintiffs. And then they would send those notices on --  
23 MarkMonitor on behalf of RIAA to Cox. And then Cox would  
24 process those.

25 And there were issues about when the notices arrived

1 as to how exactly they mapped into tickets and whether tickets  
2 got issued. You know, so if multiple notices arrived in a  
3 fairly short period of time, there was a question about how  
4 those things got mapped into tickets.

5 And the details of all that, other than this kind of  
6 stuff that I'm being generally familiar, this was the evidence  
7 of infringing activity, the precise details of how that mapped  
8 is not something that, you know, I'm here offering testimony  
9 on.

12:37:12 10 Q. Okay. So this could be -- these 20 tickets could  
11 represent 20 notices, right?

12 A. As I understand it, as I sit here right now, that sounds  
13 reasonable.

14 Q. Okay. And those 20 notices could be one song that was  
15 repeatedly detected as being on the file of the particular  
16 subscriber by MarkMonitor, right?

17 MR. GOULD: Objection, Your Honor, foundation.

18 A. I would say no.

19 THE COURT: Yeah, hold on. Do you understand the  
12:37:44 20 question?

21 THE WITNESS: Not really.

22 THE COURT: Okay.

23 THE WITNESS: But I think I do, but --

24 BY MR. BUCHANAN: (Continuing)

25 Q. So do you know how many different songs constitute the

1 20-plus tickets of these particular subscribers?

2 A. I don't know precisely, but I'm generally familiar with  
3 what the kind of ticket data looked like. And the distribution  
4 that -- for example, the really high ones were only -- the guys  
5 that got lots of tickets, were only noticed for a single song,  
6 it was the same song every time. That's generally not what the  
7 data looks like.

8 There may be a subscriber for which that was the  
9 case, but I -- you know, my sense, and like I say, I'm  
10 generally familiar, that there were, you know, 60,000  
11 subscribers in this dataset, and I looked at the data --

12 THE COURT: He's asking you whether MarkMonitor would  
13 send out notices each day if a particular song stayed in a  
14 subscriber's database?

15 Is that correct, Mr. Buchanan?

16 MR. BUCHANAN: That's correct. You did a better job  
17 than I did.

18 A. Yeah, I would say so. It's my -- you --

19 THE COURT: So you --

12:38:47 20 THE WITNESS: That's not the question I heard from  
21 him, but I think I can answer the question as you phrased it.

22 THE COURT: Well, let's let him ask it if he wants  
23 to.

24 BY MR. BUCHANAN: (Continuing)

25 Q. So you can answer the judge's question. Go ahead.

1 A. But that hypothetically could happen, it's my  
2 understanding of the process at the level which I understand  
3 it. Whether it did or didn't happen, I'm not a sufficient  
4 expert.

5 Q. Okay. So you're not -- are you saying that the ticket  
6 data indicates the content?

7 A. It's my understanding the ticket data began to identify  
8 the number of songs. But, for example, it wouldn't always  
9 identify all of the songs that might have been infringing. It  
10 might, for example, identify only some of them.

11 So it's not a complete index. And that there's a  
12 much more complicated bunch of testimony and expert to  
13 understand exactly how that process works.

14 Q. All right.

15 A. And so, the hypothetical -- or the, sorry, the  
16 characterization of the question as Your Honor described, I  
17 believe that that is something that could have happened. But  
18 I'm not testifying if in fact it did or the extent to which  
19 that may have happened.

12:39:59 20 Q. Okay. So just to get it clear, you're testifying that the  
21 ticket data that you looked at identifies the songs?

22 MR. GOULD: Wait. Your Honor, objection.

23 THE COURT: Mischaracterizes his testimony.

24 BY MR. BUCHANAN: (Continuing)

25 Q. Okay. Is that your understanding, though? Do you have an

1 understanding whether the tickets identify the content?

2 THE COURT: You may answer if you know.

3 A. I -- as I sit here right now, I don't remember  
4 specifically what was on the tickets.

5 THE COURT: Okay. All right. Go ahead. Move on.

6 BY MR. BUCHANAN: (Continuing)

7 Q. So are you aware that if -- under Cox's contract with its  
8 subscribers, if you exceeded your data limits, you were charged  
9 more? Were you aware of that?

12:40:53 10 A. I saw evidence that suggests that Cox did not in fact  
11 enforce its data limits by charging its subscribers more.

12 Q. Okay. So are you aware that that was something that  
13 subscribers were aware of, that were attracted to Cox, because  
14 they could get high-speed Internet service and Cox wouldn't  
15 charge them more if they happened to exceed it on a monthly  
16 basis?

17 A. Well, the fact -- I don't know what subscribers all knew.  
18 Certainly the fact that Cox was advertising data limits would  
19 suggest to me, and I would infer as an economist, that some  
12:41:37 20 subscribers believed that it would be enforced. Whether, in  
21 fact, it was or was not, you know, they would not necessarily  
22 know, unless they exceeded that data limit. And then they  
23 might find out, gee, they're not enforcing it, that's great.

24 And it's my understanding that Cox did, in fact, not  
25 charge customers that overexceeded their data limits for



1 exceeding their data limits.

2 Q. So there are lots of Internet-based activities that  
3 consume data, right?

4 A. Yes, in various amounts, yes.

5 Q. Streaming Netflix?

6 A. Yes.

7 Q. Streaming Spotify?

8 A. Yes.

9 Q. Watching HBO Go, Hulu, playing on video games?

12:42:19 10 A. Yes, to engage in streaming activities are data intensive.

11 Q. Okay. In your analysis, did you attempt to determine, you  
12 know, Cox's habits or their subscribers' habits with regard to  
13 those particular activities?

14 A. Well, I considered the evidence that was available to  
15 generally characterize, you know, the behavior of, you know,  
16 customers. Some of that was based on sort of average broadband  
17 subscribers' behavior and not Cox specific.

18 Q. Okay. So did -- you didn't account for the amount of  
19 video streaming a video consumes per hour in your analysis, did  
12:43:04 20 you?

21 A. Yes, I did.

22 Q. Okay. And what is that?

23 A. Well, I mean, when you say I accounted for it, I accounted  
24 for the fact that if you were a heavy high speed user of video  
25 services, then you would need to be probably in one of the

1 higher tiers. And that there's evidence that there's a  
2 significant amount of the traffic -- in fact, the most  
3 significant growth in the traffic is associated with streaming  
4 video.

5 However, the false inference some people make from  
6 that is that peer-to-peer traffic disappeared. And that's  
7 not -- in fact, the evidence doesn't show that.

8 And so, I considered what was happening with video  
9 traffic because what also matters is peer-to-peer. And my  
10 focus here was really what was going on peer-to-peer. But I  
11 did need to consider what was going on with video.

12 Q. But we're speaking of these people that have 20-plus  
13 tickets. You don't know if they were seeking a higher Internet  
14 service and a higher tier because they did a lot of streaming  
15 video? Did you consider that?

16 A. Well, yes, I mean, in the sense that the Cox subscribers  
17 would have needed to be at a higher tier to do the  
18 peer-to-peer. If they also, while they were infringing, wanted  
19 to watch a lot of TV -- and most Internet users that do a lot,  
20 do a lot of everything -- then they also would need the higher  
21 tier. They'd be even more valuable to Cox.

22 Q. Okay. So you're saying that you needed -- every Cox  
23 subscriber needed the higher tier of service to do peer-to-peer  
24 file sharing? Is that what you're saying?

25 A. No, because you said "every," and I definitely didn't say

1 "every."

2 Q. So these 22 -- again, the people that have the 20-plus  
3 tickets, do you know why they purchased a higher tier of  
4 service? Was it because they wanted to do video? They wanted  
5 to play games? They wanted to, you know, download streaming  
6 music? Any of those things?

7 Do you actually know, as you sit here under oath, why  
8 any of those people, the 20-plus, why they purchased the higher  
9 tier?

12:45:15 10 A. I don't know why any individual subscriber did anything.

11 Q. Okay. And that's -- so did you account, when you did this  
12 analysis, as to whether the people that had these 20-plus  
13 tickets, whether some were more concentrated in an area like  
14 Connecticut, or Las Vegas, or Oklahoma, and Connecticut where  
15 it would cost more to buy the same package that you might get  
16 somewhere else?

17 A. I believe I did check whether or not the distribution was  
18 representative over the customer, you know, sort of sample in  
19 this, but I don't recall if -- you know, there are -- I don't  
12:45:59 20 recall if I did that calculation.

21 Q. And you would agree that there are likely many subscribers  
22 who have top tier service and have never infringed and  
23 subscribers with bottom tier service who do infringe? You  
24 would agree with that, right?

25 MR. GOULD: Objection, Your Honor. There is no

1 foundation.

2 THE COURT: If you can answer, go ahead.

3 A. Well, I don't know for a fact. But since they have  
4 4.5 million broadband subscribers, and we're only talking about  
5 60,000 subscribers here, you know, and even by other estimates,  
6 the estimates is the majority of subscribers don't appear to  
7 engage in infringing activity. But a significant number do.

8 So I'm interested in the significant number that do,  
9 not the majority.

12:46:44 10 BY MR. BUCHANAN: (Continuing)

11 Q. That wasn't the question. The question was, weren't there  
12 many subscribers who have top tier service who never infringe  
13 and some subscribers at the bottom tiers that do?

14 A. And my answer was that I don't know that.

15 Q. Okay.

16 A. But I infer that from the data. That there are many, you  
17 know, high tier subscribers that don't infringe --

18 Q. Okay. I'm going to --

19 A. -- and there are some low tier. But I did testify if you  
20 were --

21 THE COURT: Okay. All right. Stop, stop.

22 BY MR. BUCHANAN: (Continuing)

23 Q. Sir, I am going to read your answer to that same question  
24 from your deposition, transcript 355, 12 through 17.

25 THE COURT: I think he is agreeing with you. Did you

1 listen to the answer? He said, I don't disagree with you that  
2 in this statistical numbers, that that's possible.

3 If you want to -- go ahead, if you want --

4 MR. BUCHANAN: I just want --

5 BY MR. BUCHANAN: (Continuing)

6 Q. There's certainly a number of subscribers --

7 MR. GOULD: Your Honor -- excuse me, Your Honor,  
8 objection.

9 THE COURT: I'm sorry, your objection?

12:47:39 10 MR. GOULD: Improper impeachment. He wants to  
11 refresh his recollection. The witness agreed with him.

12 THE COURT: Well, I don't know whether he did or not  
13 based on the -- what he said in his deposition. So go ahead.

14 BY MR. BUCHANAN: (Continuing)

15 Q. There is certainly a number of subscribers that got one to  
16 two tickets that don't, you know, and there are probably a  
17 bunch of subscribers that don't infringe at all that have the  
18 top tier service. And so, they're going to bias these numbers.

19 Right? In that's talking about those numbers, the  
12:48:06 20 20-plus tickets, right?

21 A. As I sit here right now, I don't remember exactly in the  
22 context of what that was. I mean, I could imagine that that  
23 would be consistent with the answer I just gave to the  
24 question.

25 But, you know, when you look at these numbers, the

1 reason why sometimes I don't -- I don't feel I can just give a  
2 yes or no answer is because they are very nuanced. And I am  
3 trying not to opine about quantity numbers unless I'm  
4 reasonably precise about what exactly those quantity numbers  
5 are and what I'm relying on about them.

6 MR. BUCHANAN: No further questions.

7 THE COURT: All right. Redirect?

8 MR. GOULD: Thank you, Your Honor.

9 REDIRECT EXAMINATION

10 BY MR. GOULD:

11 Q. Dr. Lehr, ending on the last point. You don't know, sir,  
12 whether subscribers are -- strike that.

13 Apart from the infringement evidence you have looked  
14 at in this case, you don't know what Cox's other subscribers  
15 are doing, do you?

16 MR. BUCHANAN: Objection, leading.

17 THE COURT: Well, it is leading. Rephrase the  
18 question.

19 BY MR. GOULD: (Continuing)

12:49:14 20 Q. Apart from the evidence you have looked at in this case,  
21 do you know what other subscribers are doing on the network?

22 A. Well --

23 MR. BUCHANAN: I am going to object, Your Honor.

24 Could I approach because --

25 THE COURT: Yes.

1 MR. BUCHANAN: -- I have a feeling that --

2 MR. GOULD: I am not --

3 MR. BUCHANAN: He -- never mind, Your Honor. He just  
4 told me he wasn't going there.

5 MR. OPPENHEIM: We are not going where he thinks.

6 THE COURT: Okay.

7 BY MR. GOULD: (Continuing)

8 Q. As a general matter, are you aware personally of what a  
9 subscriber who is not listed in the infringement ticket data  
10 does with their time on the Internet?

11 A. Generally, I'm familiar with evidence of sort of like, you  
12 know, what I do, what my friends do, what the general average  
13 broadband subscriber does. And there is evidence in the case  
14 from many different perspectives on what different broadband  
15 Cox subscribers do.

16 But like, I don't know, for example --

17 THE COURT: Okay. All right. Why don't we try a new  
18 question.

19 BY MR. GOULD: (Continuing)

12:50:20 20 Q. I want to pull you up slide 23.

21 Mr. Buchanan asked you, sir, if you were trying to  
22 misrepresent something by this slide. Were you trying to  
23 misrepresent data or your opinions with the slides shown here?

24 A. No. I was trying to represent the data as clearly as  
25 possible. It says: 8.4 percent higher. If it was three times

1 higher, that would be 300 percent. Which means it's obvious  
2 it's not 300 percent.

3 Q. Was this slide generated at your direction?

4 A. Yes. I mean, yes.

5 Q. This is your slide, sir?

6 A. Well, this is my slide but, again, I don't do PowerPoints.  
7 So the fact that this was higher, I didn't even notice that.

8 Q. Thank you. Slide 19, please.

9 Dr. Lehr, do you recall Mr. Buchanan asking you if  
12:51:07 10 you picked the highest and worst direct infringers of all of  
11 Cox's direct infringers?

12 A. Yes.

13 Q. You see the fraternity listed here? Do you recall that's  
14 a business customer?

15 A. Yes.

16 Q. Was 67 tickets the business customer with the greatest  
17 number of infringements?

18 A. No, because I showed another business customer with 4,000.

19 Q. And are there residential customers with more than 67  
12:51:33 20 tickets?

21 A. Yes, because I showed one that had 101 tickets, as I sit  
22 here, and there were other ones I saw too.

23 Q. You were asked questions about data caps and the tiers of  
24 Internet. Do you recall that?

25 A. Yes.



1 Q. Mr. Buchanan didn't ask you about the speeds. When a  
2 subscriber purchases a tier of Internet, does it come with a  
3 limit on speed as well as data?

4 A. Yes.

5 MR. BUCHANAN: Objection.

6 THE COURT: Overruled.

7 BY MR. GOULD: (Continued)

8 Q. And whether or not a data cap is imposed, do you know how  
9 ISPs deliver speed to customers based on the tier selected?

12:52:17 10 MR. BUCHANAN: Your Honor, I am going to object. He  
11 is not an expert on the infrastructure.

12 THE COURT: Yeah, sustained.

13 BY MR. GOULD: (Continuing)

14 Q. Mr. Buchanan asked you several questions about should they  
15 have terminated with one ticket. Do you recall that?

16 A. Yes.

17 Q. And I think you said no. Did you mean that you had  
18 that --

19 MR. BUCHANAN: Objection.

12:52:49 20 THE COURT: It's going to be leading. Ask him what  
21 he meant.

22 BY MR. GOULD: (Continuing)

23 Q. What is your opinion, if any, about when Cox should have  
24 terminated?

25 MR. BUCHANAN: I am going to object if he already

1 answered. I tried to get that out of him and he said --

2 THE COURT: No, I think he said clearly he's not here  
3 to opine on that.

4 MR. GOULD: I am just trying to clarify that, Your  
5 Honor.

6 THE COURT: All right. You may answer.

7 BY MR. GOULD: (Continuing)

8 Q. Do you have an opinion, sir, about when Cox should have  
9 terminated repeat direct infringing customers?

12:53:18 10 A. Well, my testimony today was that I am not offering a  
11 number about a specific number of tickets at which -- some  
12 specific level of evidence at which they would have terminated.

13 But, you know, to me --

14 THE COURT: Okay. All right. Thank you.

15 BY MR. GOULD: (Continuing)

16 Q. You are not a lawyer, sir?

17 A. I am not a lawyer.

18 Q. You were asked some questions about the parent or the  
19 corporate owners of certain of the plaintiffs. Do you recall  
12:53:49 20 that question?

21 A. Yes.

22 Q. Do you know whether, for instance, Sony also sells  
23 electronics, the Sony parent corporation?

24 A. Well, I believe that's what I said, but I just don't know  
25 what their total market value is.

1 Q. Stereos?

2 A. Yes, consumer appliances.

3 Q. Computers?

4 A. Yes.

5 Q. And Vivendi, the corporate owner of some of the Universal  
6 entities, are you -- do you understand they also sell  
7 televisions and run advertising agencies?

8 A. Yeah.

9 Q. And when you reported on your revenues and profits for Cox  
10 Communications, did you include all of Cox's other businesses  
11 besides residential and commercial business?

12 A. No. I mean, there's other things they are involved in.

13 Q. Did you include Cox's auto loan business?

14 A. No, because, you know, I was focused on their business  
15 that, you know, leads them to sell the broadband services to  
16 the commercial and residential consumers that's used for the  
17 copyright infringement that is at issue in this case.

18 Q. Did you include Cox Media, that's Cox's business that  
19 sells advertisements?

12:55:08 20 A. No.

21 Q. Dr. Lehr, you were asked a number of questions about your  
22 inclusion of revenue calculations based on customers that  
23 received -- excuse me -- based on customers for whom Cox  
24 reported processing one infringement ticket. Do you recall  
25 that?

1 A. Yes.

2 Q. Just so we can understand, why did you include the 1+  
3 revenue calculation?

4 A. Well, again, it was to characterize the data. The fact  
5 that someone got one ticket demonstrates that there is evidence  
6 that they were an infringing subscriber. And, you know,  
7 whether you should infer they were a repeat infringer  
8 subscriber or not, you know, that's -- I'm not offering opinion  
9 about that.

12:56:02 10 But, you know, I did offer an opinion about the fact  
11 that the sample of the data we had was a subsample of even  
12 those subscribers' tenure with Cox and of the potential  
13 infringing behavior.

14 So it's when they observe it. It's not necessarily  
15 when they started infringing or not.

16 Q. And even if you set that aside and look at the direct  
17 infringers with three-plus tickets, what does that tell you?

18 A. That's just even more evidence that they -- that those  
19 infringers were repeat infringers. And even if you look at  
12:56:37 20 that and you shorten the revenue, any way you cut -- reduce  
21 that, you still end up with a very large number that speaks to  
22 the economic incentive that Cox had to tolerate infringement on  
23 its network. Which is the core of my opinion that I'm offering  
24 here.

25 MR. GOULD: Thank you. No further questions.

1 THE COURT: All right. May Dr. Lehr be excused?

2 MR. GOULD: Yes, sir.

3 THE COURT: All right. Dr. Lehr, you are excused  
4 with our thanks, sir. Please don't discuss the testimony you  
5 have given with anyone until our trial is over. All right?

6 THE WITNESS: Yes, thank you.

7 THE COURT: All right. Thank you.

8 I am not sure that applies to experts. Maybe we can  
9 talk about that in a minute if there is some consultation  
10 sought. But let's excuse Dr. Lehr for now.

11 Thank you, sir.

12 NOTE: The witness stood down.

13 THE COURT: Yes, sir.

14 MR. OPPENHEIM: Subject to the witnesses who  
15 defendants will be calling and plaintiffs -- sorry, one moment.

16 Your Honor, sorry. We're not as organized as I had  
17 hoped we would be. Maybe we could do this right after lunch  
18 and --

19 THE COURT: Okay. All right. Let's take our lunch  
12:58:04 20 break and we'll come back at 2 o'clock.

21 Thank you, you're excused.

22 NOTE: At this point the jury leaves the courtroom;  
23 whereupon the case continues as follows:

24 JURY OUT

25 THE COURT: Does either side have any objections to

1 consulting with experts after their testimony is complete? I  
2 over-generalized my instructions there.

3 MR. OPPENHEIM: Not for experts, Your Honor.

4 THE COURT: Yeah. Mr. Elkin?

5 MR. ELKIN: We don't have any either, Your Honor.

6 THE COURT: Yeah, I -- okay. Let's --

7 MR. ELKIN: I'd like to --

8 THE COURT: Yes, sir.

9 MR. ELKIN: If I could just raise one issue? I  
10 suspect that after Mr. Oppenheim checks his notes and he rests,  
11 our first witness is going to be Mr. Negretti.

12 I had prepared a very, very simple demonstrative to  
13 help explain the issue of speed because it's sort of ephemeral,  
14 and illustrations related to uploading, downloading, and  
15 streaming.

16 I understand that counsel has an objection. I just  
17 figured I would get this resolved quickly. And if I could hand  
18 this up.

19 THE COURT: Sure. I'm happy to look at it. Joe is  
12:59:40 20 back with the jury and --

21 MR. ELKIN: Sorry about that.

22 THE COURT: That's all right.

23 MR. ELKIN: Didn't mean to leave you shorthanded.

24 MR. ZEBRAK: Your Honor, might I be heard on that as  
25 you look at it?

1 THE COURT: Yeah. Give me a chance to look it  
2 though, please, Mr. Zebrak.

3 MR. ZEBRAK: Of course.

4 THE COURT: Okay. What's your objection?

5 MR. ZEBRAK: Well, first, I mean, it's -- it really  
6 is over the top, Your Honor. This is just pandering to the  
7 jury with something that there's no basis that this is  
8 representative of what's happening.

9 And the third slide depicts Christmas morning with  
10 snowflakes in the background, a puppy.  
13:00:24

11 On the first slide, the dad's watching baseball.  
12 There's teddy bears.

13 And I mean, it -- this isn't necessary. It doesn't  
14 illustrate anything, technically speaking. It's just argument  
15 from some consultant, no doubt. It's unnecessary.

16 And we've already given them the courtesy of -- well,  
17 excuse me. Go ahead.

18 THE COURT: Yeah. All right.

19 MR. ELKIN: So, Your Honor, this was further -- we  
13:00:47 20 tried to make the slide actually the most placid. It has  
21 nothing to do with Cox. It has to do with having the witness  
22 discuss, you know, what is downloading, what's uploading,  
23 what's streaming.

24 It was to help sort of bring the discussion to life  
25 without characterizing anything.

1           So I -- you know, I think there have been slides that  
2 have been used, frankly, by the other side that's far more  
3 edgier than this, and we just did not have any issue with them.  
4 But I am not going to sit here and fall on my sword with regard  
5 to this. I didn't think this was going to be the least bit  
6 controversial.

7           THE COURT: Yes, sir.

8           MR. ZEBRAK: Your Honor, first of all, I take issue  
9 with the idea that our slides come anywhere close to this.  
13:01:36 10 We've already made numbers of modifications to our slides to  
11 accommodate their objections.

12           And these slides don't illustrate anything about  
13 streaming, downloading, or the Internet. But obviously --

14           THE COURT: All right. I'm going to allow the  
15 slides. They are invoking some emotions, but not unduly. And  
16 I would imagine that they're going to be up and down within a  
17 fairly discrete period of time. And so, your exception is  
18 noted, but I'll let them in.

19           Anything else before we break?

13:02:05 20           MR. ZEBRAK: Well, there's one other item. We  
21 consented to allowing them to substitute in a color copy of an  
22 illegible black and white PowerPoint that they produced in  
23 discovery with their witness.

24           So we have no objection to them using the legible  
25 color copy.



1 MR. ELKIN: And we appreciate that.

2 THE COURT: Okay. All right then, we're in recess  
3 until 2:00 p.m.

4 NOTE: The morning portion of the proceedings on  
5 December 11, 2019, is concluded.

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CERTIFICATE OF COURT REPORTERS

14

15

16 We certify that the foregoing is a true and  
17 accurate transcription of our stenographic notes.

18

19

20 /s/ Norman B. Linnell  
Norman B. Linnell, RPR, CM, VCE, FCRR

21

22

23 /s/ Anneliese J. Thomson  
Anneliese J. Thomson, RDR, CRR

24

25